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REPORT
OF THE
COMMISSIONER OF EDUCATION
FOR
THE YEAR ENDED JUNE 30, 1916

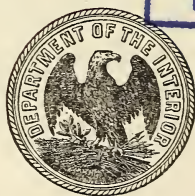
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THE UNITED STATES
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Created as a department March 2, 1867.

Made an office of the Interior Department July 1, 1869.

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REPORT OF THE COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 15, 1916.

SIR: I have the honor to transmit herewith the manuscript of Volume I of the report of the Commissioner of Education for the fiscal year ended June 30, 1916. In the introduction to Volume I of my report for the year ended June 30, 1915, I called attention to the fact that it was impossible to have the material for Volume II of that report ready for the printer by October 15, the latest date on which it could be submitted in compliance with the new law (38 Stat. L., 886), and gave in some detail the reasons why this statistical volume can not be ready by that date. In view of this fact I recommended that Congress be requested to pass a special act authorizing the printing of that volume of the report at such time as it could be ready, not later than February 15, 1916. I also recommended that the act referred to above be so amended as to extend to December 31 the time within which the manuscript of both volumes of the annual report of the Commissioner of Education may be submitted. No action having been taken upon these recommendations, it becomes necessary to submit the manuscript of what should have been Volume II of the report for 1915, for use as Volume II of the report for 1916, nine months later than the time when it might have been issued if the law permitted it to be printed when ready. Since the statistical part of the present report can not be ready, for the reasons already referred to, before December 31, I recommend that Congress be requested to pass a special act authorizing it to be printed as soon as ready, so that the information which it contains may be available for the use of the public before it is out of date.

The manuscript submitted herewith contains a fairly comprehensive interpretive survey of the progress of education in the United States for the school year of 1915-16, and a similar survey of educational progress in all those foreign countries from which sufficient information could be obtained.

The section pertaining to foreign countries contains this year a statistical survey of education in all foreign countries from which

reports have recently been received. This statistical material is arranged in three sections: Elementary, secondary, and higher. This is the first time in the history of this bureau that such a presentation has been made. It is believed that it will meet, in some degree at least, the demand arising from the new interest which educators and statesmen in this country are taking in all forms of education in other countries, which interest will be greatly increased when European countries now at war undertake their reconstruction after the war is over. This greater interest in education in foreign countries is due not only to a recognition of the fact that all problems of education are now international to such an extent that those who would work most effectively for the improvement of our own systems and methods of education must be informed as to what other countries are doing, but also to the closer trade relations which this country is now or soon will be establishing with all the commercial countries of the world, and a recognition of the fact that productive industries and commercial activities of all countries must depend directly upon the character, extent, and efficiency of their systems of education.

Theoretically the chapters of this volume pertaining to our own country should give a complete summary and an accurate interpretation of all important movements in all departments and phases of education in the United States and its Territories and possessions for the school year 1915-16. But this is not practicable. For some departments movements are so slow that little progress, if any, can be observed in so short a period as a year. For that reason some topics treated in recent reports are omitted in this, and some that have not been treated in those reports for two or three years are now included, and the survey of them covers the years intervening since they last received attention. In other departments the movements are so rapid and fundamental that it is very difficult, if not impossible, to gather all the significant facts relating to them and to interpret correctly all their phases. In many instances only after the lapse of years may one distinguish with certainty the main trend of the stream from its cross currents and eddies. Yet it is believed that in every case the survey is sufficiently comprehensive and the interpretation accurate enough to serve the purposes of students of education and those who are actively engaged in educational work as officers and teachers. If they do not find herein full answers to all their questions, they will find at least some assistance toward making out answers for themselves. Most of the chapters might be made more satisfactory if they could be written or revised after the educational statistics for the year have been compiled. But this is not possible under the present requirement as to the time of submitting the manuscript for the report, as has already been explained.

Some topics not previously treated in any report are included in this. These refer to phases of education of very recent development. The treatment of these must, of course, be more or less historical, and must contain some account of their origin and development up to the time when they are felt to have become sufficiently important to merit separate consideration. Many of the newer phases of educational progress, although they may have great interest for those directly connected with them and to professional students of education, can receive only incidental treatment in a survey of this kind.

In a new and progressive country like ours, with its widely varying conditions from one section to another, with its cosmopolitan population, with its rich and complex social, civic, and industrial life, with its democratic State, local, and individual initiative, and its consequent weakness in, or total lack of, central direction and administrative authority, there can never be a complete and harmonious system of education. There will always be found divergent and conflicting tendencies and influences. Strength and weakness, great efficiency, and wasteful failure will be found side by side in the same State, county, city, or school. Some localities will excel in one respect, others in other respects. Some counties will give much attention and care to their schools, libraries, and other agencies of education; others will give all too little. It is democracy's way with all its interests. Herein is found its weakness as well as its strength and never-failing possibilities of unlimited achievement. It may be the despair of those who would count and measure and systematize, unify, bind, and mechanically control all public interests; but it is the hope of those who have attained to some degree of understanding of the abounding and irresistible forces of life, and have faith in the inherent ability of the masses of mankind to solve their own problems, direct their own forces, produce and train their own leaders, and, given time, to adjust themselves to constantly changing conditions.

For these reasons, opinions as to the character and value of our system (or systems or lack of system) of education differ widely. Some can see in our public schools (all our schools are public in aim and purpose, whatever the source of their support or the form of their control) only inefficiency and failure, while others see in them the mightiest of all forces making for the material welfare, civic righteousness, political wisdom, social purity, intellectual and spiritual culture, and freedom, strength, and safety of State and Nation. But all must recognize that schools, school systems, and all other agencies of education in such a country as this are forever in the making. If it were possible to perfect them to-day to such an extent that they would be adapted in every particular to all our

needs, by that same token they would be imperfect and in need of readjustment to-morrow, for in democratic freedom life flows on unfettered and is never still. Our institutions of education, like all others, must constantly differentiate, transform, and readjust themselves to meet the new conditions and new needs or be cast aside as an outgrown shell or an outworn implement. They who would criticize justly must see clearly and understand both the institutions and the life which they serve. They must remember that all important changes are made in actual or supposed recognition of needs created by new conditions, and will therefore follow rather than precede them or accompany them with equal step. Before present needs are fully met, new conditions arise and bring with them new needs to be met only by new changes.

The stronger the flow of life and the quicker its pulse, the more impossible that the provisions for education can ever be adequate to the needs of any moment, and this is true also in proportion to the extent in which the support and control of education depend upon the intelligence and good will of all the people rather than on the wisdom and benevolence of a central autocratic power. But just to this extent also is it true that they will never be wholly inadequate or totally neglected. There is, too, education of a very high type for the people in the very acts of observing changing conditions and needs, and in trying to adjust their institutions to them, even though success in adjustment may be only partial. "Weakness in freedom shall grow stronger than strength with a chain." "'Tis stress and strain in moth and men" that develop their strength and intelligence. Again, it must be remembered that in our individual, civic, governmental, and educational life we have passed the bounds of precedent and the possibility of action by mere imitation or by guidance through irresponsible authority. Every change must be, to some extent at least, a new experiment guided only by prescient instinct and an understanding of fundamental interests and principles; and, unfortunately, of fundamental principles of education we have comparatively little definite scientific knowledge. These considerations should tend to give patience to the rash critics of our schools and other means of education. If they do not, then an honest effort to improve them in a large and thoroughgoing way will bring both patience and moderation in their condemnation of them.

Because of the magnitude, complexity, looseness, and unevenness of our educational systems and the absence of any central administrative agency, it is very difficult to say just what the sum total and average of tendencies for the year have been, but careful reading of this volume of this report can not fail to leave the impression that the tendency is toward democracy, efficiency, and practical utility. A smaller per cent of the children than ever before fail to receive

some education in the schools. A larger per cent go through the grades of the elementary schools and enter and graduate from the high schools. The number of students in colleges, universities, and technical and professional schools increases. Standards in schools of all kinds are being raised gradually, and more effort is made to adjust the content of courses of study, methods of teaching, and school regimen to the needs of different classes of children and different individuals. More attention is given to the preparation of teachers. Education in its various phases is studied more in colleges and universities, and there is more intelligent original educational research. Responsible authorities of many State, county, and city school systems and individual schools have careful studies or surveys made of the systems and schools for which they are responsible, solely for the purpose of discovering their deficiencies and of working out constructive programs for their improvement. Some of these surveys are made at considerable expense, yet with the belief that it is wise to use this money in finding ways to make the larger amounts more effective for good. Sometimes boards of education are moved to have these surveys made by their own feeling of lack of definite and expert knowledge about the schools for which they are responsible. Sometimes they are moved by the adverse criticism of the people. Frequently the people themselves turn from unintelligent destructive criticism to constructive efforts and provide for the survey through chambers of commerce or other organizations. While it can not be claimed that these surveys are intelligent in all respects or that the surveyors are always wise in their conclusions, yet it can not be denied that they are becoming more and more helpful to the systems and schools surveyed, and that through them a valuable body of knowledge, more definite than we have ever had before about our schools, is being gradually accumulated, and that certain principles of administration and school practice are being lifted to the surface in such a way as to serve as a nucleus for a national educational policy.

For many years this bureau has been appealed to to make or direct surveys of this kind, and in 1910-11 it did make, with some outside help, a survey of the schools of the City of Baltimore, and the report of the survey was published in the form of a bulletin of the bureau. In the following years it made more or less formal surveys of several colleges, universities, technical and normal schools, and more or less thorough studies of the schools of Gary, Ind., and of several other cities and towns and also of many country schools, but because of the lack of means (money and men) it refused to undertake any complete survey of school systems. However, the appeals for surveys of this kind became so numerous and so urgent, and it became so plainly the duty of the bureau to respond to this appeal to the

extent of its ability, that it finally yielded, and, despite its lack of preparation for this kind of work, it has within the year made and directed a number of important surveys on an extensive scale, and now has promised for the immediate future several more, as shown by the following extract from the Commissioner's Statement to the Secretary of the Interior for the year ended June 30, 1916. It should be stated that however willing the bureau may be to render this service to the States and the people, and thereby enable them to establish and maintain better systems of education as is required of the bureau by the act creating it, it has to deny many requests for important surveys.

In September the specialist in higher education made a careful internal survey of the University of Oregon. This survey was made at the request of the president and the board of regents of the university, and a report with conclusions and recommendations was submitted to them.

In October, November, and December the bureau conducted a survey of the State University of Iowa, the Iowa State College of Agriculture and Mechanic Arts, and the Iowa State Teachers' College. This survey was made at the request of the Iowa State Board of Education, and a report with conclusions and recommendations was submitted to this board early in March.

In November the specialist in higher education and one of the specialists in home economics made an internal survey of the College of St. Teresa. This survey was made at the request of the president and faculty of the college, and a report with conclusions and recommendations was submitted to them in December.

In March and April the bureau made a survey of the University of Washington, State College of Washington, and the Washington State normal schools at Ellensburg, Cheney, and Bellingham, and such a general survey of the public-school system of the State as was thought necessary to an understanding of the relation of the institutions of higher education to the public-school system. This survey was made at the request of the State Commission of Educational Survey created by an act of the legislature, and a report with conclusions and recommendations was submitted to this commission in April.

Through the winter and spring the bureau conducted a survey of the University of North Dakota; the State College of Agriculture of North Dakota; the normal schools at Mayville, Minot, and Valley City; the Normal and Industrial School at Ellendale; the North Dakota School of Science and Technology at Wahpeton; the School of Forestry at Bottineau; and the State library commission, and made such a general survey of the public-school system as was thought necessary for an understanding of the relation of the public schools to the institutions of higher education. The survey was made at the request of the State board of regents, who were required by law to have the survey made, and a report with conclusions and recommendations was submitted to this board in July.

In the fall and winter a partial survey was made of the public schools of Jamestown, N. Dak., for the purpose of advising the board of education of that city as to the possible reorganization of its school system, and a report recommending a reorganization of the 12 years of elementary and high schools on the basis of 6 years elementary and 6 years high school, with a division of the high school into junior and senior periods was submitted to the board early in the spring.

In February the bureau began a comprehensive survey of the public-school system of the city of San Francisco. A good part of the work necessary to be done on the grounds was done in February and March; the remainder had to be postponed until the opening of the schools in August and has now been about completed. This survey was undertaken at the request of the board of education and of the chamber of commerce of the city of San Francisco, and a report with conclusions and recommendations will be made to them.

In February and March the bureau conducted a survey of the schools of Webster Groves, Mo., at the request of the superintendent and board of education of that city, and a report with conclusions and recommendations is being submitted to them.

By agreement with the secretary of the Nassau County Association and a representative of the New York State department of education, the bureau assisted in February, March, and April in a survey of the public schools of Nassau County, N. Y., made for the purpose of recommending improvements in the schools of the county, and a report of the portion of this survey made by this bureau has been submitted to the State department of education of New York.

In April and May one of the specialists in school and home gardening made a school and home garden survey of the city of Richmond, Ind., as a part of a general industrial education survey of that city. A report of the part of the work done by the bureau, with conclusions and recommendations, has been submitted to the Richmond Vocational Education Survey Committee.

During the winter and spring the bureau made a survey of the system of public education of the State of Wyoming. This survey included a study of the the administration of the public schools, an inspection of the schools of several counties, and a consideration of certain phases of the work of the State university. The survey was undertaken at the request of the Wyoming State School Code Committee, and a report, with conclusions and recommendations, was submitted to this committee in July.

The survey of private and higher schools for Negroes in the United States, which has been in progress for three years, has been completed and the results are being prepared for publication as bulletins of this bureau.

The educational survey of the southern Appalachian Mountain counties in the States of Virginia, West Virginia, North Carolina, Tennessee, South Carolina, Georgia, and Alabama, begun a year ago by Mr. C. G. Burkitt, employed especially for this purpose, has been continued. It is expected that this work will be completed and a report of it prepared within the current fiscal year.

Progress has been made on the educational survey of the State of Delaware. During the year investigations were made of opportunities of education for adult immigrants in the city of Wilmington, of opportunities for home gardens under the direction of the schools in Wilmington and several of the smaller towns, of industrial education in Wilmington, of the teaching of civics in the schools of Wilmington and certain other rural towns and communities as set forth elsewhere in this statement, and of the teaching of home economics and domestic science in certain parts of the State. The Children's Bureau and the United States Public Health Service cooperate with the Bureau of Education in this survey. Plans have been made for the completion of a large part of the survey of the State during the current fiscal year. The survey of the rural schools will be finished within the first half of the year. In connection with the survey is going constructive work. This survey is being made at the request of the governor of the State, the State commissioner of education, the president and faculty of Delaware College, the superintendent of schools at Wilmington, and representatives of various organizations interested in the

welfare of the State. The results of the survey will be published in sections from time to time as they are completed and will be submitted to the State board of education.

The work of the educational survey of the State of Tennessee to be made at the request of the State board of education of that State has been begun. One of the special collaborators attached to the substation of the bureau at the George Peabody College for Teachers has made a partial study of the high schools of the State. The work of the survey will be continued throughout the year.

In all these surveys of cities, counties, States, and institutions the bureau has had the hearty cooperation of school officials and teachers. In most instances the expenses of the members of the bureau and the expenses and honorariums of persons employed in the survey but not connected directly with the bureau have been paid by the city, county, State, or institution for which the survey has been made. The reports of all the surveys (except that of Nassau County, N. Y., which will be published by the State department of education of New York, that of the University of Oregon which has been published by that university, and the reports of the surveys of the College of St. Teresa, and the schools of Jamestown, N. Dak., which are not of such a nature as to justify their publication as bulletins of this bureau), with conclusions and recommendations based on them, will be published as bulletins of this bureau. In this way the bureau will be able gradually to establish policies and standards of education throughout the whole country more effectively than could be done in any other way.

Other surveys promised for the current fiscal year include a survey of the administration of the public-school system of the State of Colorado, which is now being made at the request of the Colorado survey committee of State affairs; a survey of the entire educational system of the State of Arizona, which is now being made at the request of the State superintendent of public instruction, the president of the State university, and the State Teachers' Association; a survey of the entire educational system of the State of New Mexico (promised conditionally); surveys of the public-school systems of the cities of Canton and Elyria, Ohio; surveys of the public schools of Falls and Walker Counties, Tex.; an internal survey of the University of Nevada, now being made at the request of the governor of Nevada, the board of regents, and the president of the university; an internal survey of the University of South Carolina; a survey of the Bradley Polytechnic Institute of Peoria, Ill., which is now being made at the request of the trustees, president, and faculty of the institute.

Attention is called to a few phases of educational interest and progress deserving special consideration: (1) The continued increase of interest in vocational education indicated partly by the passing of the Federal vocational education bill through the Senate without opposition and the apparent disappearance of opposition to it in the House of Representatives; (2) the inauguration of extension education in agriculture and home economics under the provisions of the Smith-Lever Act, appropriating Federal funds for this purpose; (3) the progress in the reorganization of secondary education and the division of the 12 years of elementary and secondary schooling into two equal parts of 6 years each instead of the present division of 8 and 4 years; (4) the increase of interest in the improve-

ment of rural schools through longer terms, better teachers, better administration and supervision, consolidation, the erection of teachers' homes, and the better adjustment of courses of study to the needs of rural life; (5) the widespread interest in offering to immigrants from foreign countries opportunity to learn to understand and speak the English language, and for such other education as will prepare them for modern industrial, social, and civic life, and for possible citizenship; (6) the increase of interest in teaching adult natives to read and write, and in offering to those of very meager education opportunities to extend their education, in night schools and elsewhere; (7) the increase of interest in the schools as community forums and social centers; (8) the extension of interest in home gardening for children under the direction of the schools as outlined by this bureau, a form of occupation and industrial education which is made still more important by the passage of State and Federal child-labor laws; (9) the increased interest in military training and in the health and physical development of children due to the awakened consciousness of the need of national preparedness for peace and for possible defense against an invading foe.

These and many other items that might be mentioned show the tendency to make our education all inclusive and to make it serve the needs of all the people.

In my introduction to the report of the Commissioner of Education for the year ended June 30, 1914, I included recommendations which had been submitted in the Commissioner's Statement to the Secretary of the Interior for that year. Some of these recommendations have been complied with, but most of the needs on which they were based still exist and the two years intervening have brought to the surface new needs on which additional recommendations have been based. All the operations of this bureau are of such interest to students of education, school officers, teachers, and the public generally that I beg leave to include in this introduction the recommendations contained in the Commissioner's Statement to the Secretary of the Interior for the year ended June 30, 1916.

(1) An increase in the salaries of chief clerk, editor, statistician, specialist in land-grant college statistics, specialist in higher education, and other specialists, and the removal of the limit on amount of salaries which may be paid from the lump-sum appropriation for rural-school education and industrial education. The duties of these positions require the services of men and women of such kind and degree of ability as demand salaries considerably higher than are now paid in this bureau. I can only repeat what I said in my statements for 1913, for 1914, and for 1915, that work of this kind had better not be attempted than not done well.

(2) An assistant commissioner, who should also be a specialist in secondary education and should serve as chief of a high-school division of the bureau. The duties of the office make it necessary for the commissioner to visit distant

parts of the country and to be absent from the office frequently many days at a time. There should be an assistant commissioner to carry on the work in the office during his absence and to relieve him of much of the routine work of the office, so that he may be able to give more time and attention to the larger problems of education and to direct more effectively the more important work of the bureau. Probably the most important phase in public education in the United States at present is that of the secondary schools. The high school is, or should be, the heart and center of our school system. The problems of the high school are more difficult and their solution more urgent than those of any other part of the school system. The head of the high-school division of the bureau should therefore be a man of great ability. By combining the offices of assistant commissioner and of specialist in secondary education it should be possible to pay a salary sufficiently large to obtain the services of such a man.

(3) Additional specialists in higher education, including education in universities, colleges, schools of technology, schools of professional education, and normal schools. The constant and increasing demands from these schools for the help of the bureau in making surveys and for advice as to their reconstruction and better coordination are larger and far more numerous than it can meet with its present force. There is special need of an able man, familiar with agricultural education and the problems of Negro education in the South, to devote his entire time and attention to the colleges of agriculture for Negroes in the Southern States.

(4) Additional specialists in school and home gardening. The proper education of many millions of children, and even the possibility of their attending school at all during the years in which attendance at school is most valuable, depend to a very large extent upon the general adoption of the work which the bureau is promoting through this division. It is very important that there should be in the bureau a sufficient number of specialists in this subject to visit all cities, towns, and manufacturing villages in the country, advise with their school officials and teachers, and assist in directing the work of teachers until the plan is well enough understood and there are enough trained teachers that work in any city or town who may go on without outside direction, or until the several States have made provision for the direction of the work from their offices of education. The enactment of the national child-labor law prohibiting the employment of children under 14 years of age in mills, mines, and quarries must result in enforced idleness of hundreds of thousands of boys and girls and in unnecessary hardships to them and their parents unless there is found for them some form or forms of suitable employment economically profitable and at the same time educational. Results obtained through home and school gardening confirm the belief that both economically and educationally this is one of the very best forms of employment for children between the ages of 8 and 14 years.

(5) An increase in the number of specialists and assistants in rural education and industrial education. The few specialists now employed in these subjects are wholly unable to do more than a small part of the work needed. States are asking for expert advice in regard to school legislation and the improvement of their school systems. States, counties, and local communities want comprehensive and detailed school surveys. There is need and demand for such general and authoritative studies of school administration, courses of study, methods of teaching, and adaptation of the work of the schools to the life and needs of the communities which they serve as can be made effectively only by a large group of men and women of the best ability working under the direction of the Federal Government.

(6) The formation of a division of commercial education, with specialists and assistants, for the investigation of problems of commercial education and to assist in making plans and finding means for the preparation of our young people for participation in the larger commercial life upon which the country is now entering. The rapid expansion of the foreign commerce of the United States because of the war in Europe, and for other reasons more permanent, makes the need for this division more pressing than when it was first recommended some years ago.

(7) More adequate provision for the investigation and promotion of school sanitation and hygiene and the physical culture and development of pupils. Nearly 20,000,000 children spend a good part of their time each year in public and private schools in the United States. They come to these schools that they may gain preparation and strength for life. In many of the schools the heating, lighting, ventilation, and other means of sanitation are so poor that instead of gaining strength for life they have the seeds of disease and death sown in their systems. In many other schools the daily regimen is such as to cause the children to lose a very large per cent of that which they might gain with a better regimen. From State, county, and city school officers, in all parts of the country, thousands of requests come to the bureau for information and advice in regard to these matters. The bureau should be able to give accurate information and sound advice regarding various phases of this subject. The establishment of health and right health habits must be considered a most important and vital principle in any education that is to fit for life. Provision for such games, plays, drills, and other exercises as will develop physical strength, bodily control, and endurance is essential to the schools of any nation that would maintain for all its citizens a high degree of preparedness for the duties both of peace and of war.

(8) The formation of a division, with a group of able specialists and assistants, for the investigation of problems of education and school administration in cities and towns. The drift of population to the cities and towns continues, and the proportion of urban population to rural population is increasing rapidly. Almost one-half of the children in the United States now live in cities, towns, and densely populated suburban communities. In some sections of the country a very large proportion of these children are the children of foreign-born parents. All this adds to the complexity and difficulty of the problems of city-school administration, especially in the larger cities. Many hundreds of requests for advice and information in regard to these problems come to the bureau every year. At present there is no one in the bureau whose special duty it is to respond to them. Within the last year requests have come to the bureau for comprehensive educational surveys in 18 cities, and many other cities have appealed to other agencies for work of this kind because their superintendents and boards of education knew that this bureau was not equipped as it should be to do this work. If the right education of the 12,000,000 children who live in cities is a matter of interest to the Nation as a whole, then this bureau should be enabled to do effectively those things which no other agency can do to assist the school officers and teachers of these cities in making the work of their schools more effective.

(9) The establishment of a division, with specialists and assistants, for the investigation of the education of exceptional children. There are in the United States more than 2,000,000 children whose education requires means varying widely from those in common use for the education of normal children. These children are to be found in cities, towns, and rural communities alike, and all school officers and teachers have to deal with them. The Bureau of Education can not be considered as performing its duties to all the population with impar-

tiality until it has in its service men and women who can give accurate information and helpful advice in regard to the education of these children.

(10) Provision for the investigation of the education of adult illiterates and the dissemination of information as to the best methods of teaching illiterate men and women to read and write, and of extending the meager education of those who were denied the advantages of the schools in their childhood and youth. According to the census of 1910, there were in the United States more than 5,500,000 illiterate men and women and children over the age when they may be expected to make a beginning in the public schools, and there were many millions more barely able to read and write. This illiteracy is a burden to society and a menace to State and Nation. Within the past few years much interest in the removal of this burden has developed. The response to the little attention which this bureau has been able to give to this subject indicates that States, local communities, individuals, and benevolent societies are ready to cooperate heartily with the Federal Government in any reasonable plans which may be devised and presented by this bureau for this purpose. Within the last two years the people of the country have become conscious of the special need for more adequate provision for preparing for American life and possible citizenship the large number of persons who come to this country from southern and eastern European countries. It is especially important that they be given opportunity for learning the language of the country and that they be induced to take advantage of this opportunity. States and cities must provide the means for this, but the task of working out effective plans and of assisting States and cities in putting them into operation belongs to the Nation as a whole, and this bureau is the Nation's logical agent for this work.

(11) A careful and thorough investigation as to the means of better education of children in their homes, and the dissemination of information as to the best methods for the early physical, mental, and moral education of children in the home and for the better cooperation of home and school in the education of children of school age. Children of the United States are in school less than 4 per cent of their time from birth to 21. The home is the primary and fundamental educational institution. Schools and other agencies are only secondary. If education in the home fails, no other agency can make good the failure. With our changing civilization and social and industrial life, there is need for more careful study of education in the home. The bureau has already made a beginning in this work, but there is need of far more than it can hope to do without much larger equipment for it.

(12) A specialist in educational theory and practice, to serve as a director of investigations in education, assisting National, State, and local committees and commissions and making available for them the large collections of material in the library of the bureau and elsewhere in Washington. National, State, and local associations appoint many committees, and States and cities appoint many commissions to investigate and report on various problems of education. Many of these committees and commissions fail more or less completely for want of material and intelligent assistance and direction. The library of this bureau, one of the most complete of its kind in the world, contains a large collection of material for most of these investigations. The specialist here recommended could put this collection at the service of these committees and commissions and at the same time give much-needed assistance and direction. His services would also be valuable to other specialists in the bureau and to hundreds of individual students of education upon whose investigations the country depends for most of its knowledge of education. This recommendation has been repeated each year for five years. The need of such a person in the bureau be-

comes greater and more pressing each year. Most of the work of the bureau suffers from want of the assistance such a person could give.

(13) An assistant editor. The editorial work of the office has increased more than sixfold within the past five years, and it must increase still more within the next few years. It is now impossible for one editor to perform satisfactorily all the required editorial work. The more careful editing of the reports and bulletins of the bureau which this addition to the editorial staff would make possible would save each year in the cost of printing more than the salary of an assistant editor.

(14) A specialist in foreign and domestic systems of education and an assistant in foreign systems of education. This bureau is undertaking to keep the people of the United States informed as to all important progress in education and in methods of teaching in all countries of the world. It must have, in order to accomplish this work with any degree of satisfaction, the additional assistance here indicated.

(15) Two additional collectors and compilers of statistics. Material for prompt and reliable statistical reports can not be had by this bureau without occasional visits to State and city education offices and the first-hand study of their returns. This is not possible with the force the bureau now has for this work.

(16) A comparatively large increase in the number of clerks, stenographers, copyists, laborers, and messengers to do the work of the bureau as it is now organized, and a still larger increase to do such additional work of this nature as may be made necessary by any enlargement that may be made in the staff of specialists.

(17) An increase of appropriation for traveling expenses for the commissioner and employees acting under his direction. This is necessary to enable them to make original investigations in education in different parts of the country and to disseminate information by meeting with educational associations and other societies interested in education in different parts of the country. Without funds sufficient to pay necessary traveling expenses, the bureau can not do its work effectively, and must constantly be open to the charge of giving help where expenses can be paid rather than where help is most needed.

(18) Means to enable the bureau to cooperate with schools of education in colleges and universities, with normal schools, and with city and county school systems in making important investigations and definite experiments in elementary and secondary school education under scientific control. There is as much need for scientific experiments in education as there is for such experiments in agriculture or engineering. Although we are spending annually many hundreds of millions of dollars on public education, we have little accurate and definite knowledge about the value of various forms of education and methods of teaching, and we can have little more until provision is made for such scientific experiments as are here indicated. With a comparatively small amount of money the bureau might obtain the cooperation of individuals, institutions, and boards of education in making important investigations and experiments in education not otherwise possible without much larger expenditures.

(19) A larger appropriation to enable the Secretary of the Interior, in his discretion and under his direction, and with the advice and cooperation of the Public Health Service, to provide for the medical and sanitary relief of the Eskimos, Aleuts, Indians, and other natives of Alaska. Careful investigations made with the cooperation of the Public Health Service have shown the necessity of immediate provision for the care of the health of the natives of this Territory and for the eradication of communicable diseases now prevalent in

different sections of the Territory which, if not put under immediate control, will soon destroy the lives of many of these people and spread among the white settlers. The addition of \$25,000 to the appropriation for this purpose for the current fiscal year, making the total of \$50,000 for this purpose, has enabled the bureau to do more for the health of these people than ever before, but much still remains to be done. To do what is needed will require an annual appropriation of at least \$100,000. An appropriation of \$62,500 will be asked for the next fiscal year.

(20) The bureau should be authorized to sell some of the 4,000 reindeer belonging to the Government and use the proceeds in distributing the remainder to those sections of northwest Alaska where they can be herded profitably, but where there are none now. The Alaska reindeer service, which was begun in a small way a little more than 20 years ago, has now reached large proportions, and has accomplished much for the support and for the education and civilization of the natives in the northwestern part of the Territory. The bureau wishes to extend at once the distribution of reindeer in the sections in which reindeer may be herded profitably, to give all the natives of this section the advantage which has already come to those living in settlements to which reindeer have been sent, and to complete this work so there may not be need for a continuation of the appropriation for this purpose. The annual appropriation of \$5,000, much of which must be used for other purposes than distribution of reindeer, is not sufficient to enable the bureau to proceed with this distribution as rapidly as it should. Authority to sell male deer and use the proceeds for this purpose would hasten the distribution without additional cost to the Government.

(21) The time has come when the natives in all parts of Alaska should be assisted and directed in the establishment and development of industries of their own, which will give them remunerative employment through much of the time in which they are now more or less idle and by which they may make for themselves a better support and gradually take over the larger part of the cost of their own schools and medical attendance. The success of the reindeer industry in the northwestern part of the Territory and of experiments in other industries, on a smaller scale, in other parts of the Territory would seem to justify the use of a few thousand dollars a year for this purpose for the next 10 or 15 years. The sooner these people are made wholly self-supporting, the less will be the final cost of their support and education to the Government. A few thousand dollars judiciously expended for this purpose now will save hundreds of thousands of dollars later.

(22) The annual estimates for appropriations for "education of natives in Alaska," for "reindeer in Alaska," and for "medical attendance of natives in Alaska" are usually put in the sundry civil bill, which on alternate years, in which the long session of Congress meets, is not considered until near the end of the fiscal year and sometimes until after the beginning of the next, but supplies for certain parts of Alaska must be shipped from Seattle in June or early in July in order to reach their destination. Buildings for schools or hospitals can be erected much better and at less cost in the summer than in the winter, and materials for such buildings should be shipped as early in the year as possible. Contracts with teachers should be made when possible in May and June. It is, therefore, recommended that these estimates be considered separately or in some other bill which is likely to receive final consideration earlier in the year.

(23) For the printing of the annual report of the commissioner and the bulletins and circulars which should issue from the bureau each year there should be available not less than \$100,000. The growing importance of educa-

tion in our national life, the large expenditures for schools and other agencies of education, the increasing extension and differentiation of education to meet the new and increasing needs of industrial and civic life have created a demand for such information as is contained in these bulletins in many and widely varied fields of education. From no other source can this demand be supplied than from this bureau, and from this bureau it should be met as fully as possible. This will require the printing of a large number of bulletins each year, and many of these should be printed in much larger editions. The limit of 12,500 copies for any edition of a bulletin should be removed, so that it may be printed in such numbers as in the judgment of the Secretary of the Interior may be necessary. Fifty thousand school officers can not be supplied from an edition of 12,500 copies of a bulletin on a subject in which they are all equally interested.

(24) Congress should again be requested to except the Annual Report of the Commissioner of Education from the law in regard to the time of submitting copy of annual reports and accompanying documents, so as to permit the copy for the Annual Report of the Commissioner of Education to be submitted for printing not later than January 15. The nature of this report is such that it can not under any circumstances be completed as early as the middle of October. Under present conditions it can hardly be completed earlier than January 15.

(25) When the vocational education bill which passed the Senate at the last session of Congress becomes a law, the vocational education commission provided for in the bill and of which the Commissioner of Education will, according to the terms of the bill, be the adviser and executive agent, and the employees of the commission should be housed in the same building with the Bureau of Education and have easy access to its library, its mailing lists, and other conveniences. For the effective work of the commission it must bring together at its office courses of study, plans of buildings and equipment for trade schools, schools of agriculture, and commercial schools, and other schools in which the commission is interested, and samples of school work in trades and industries. For the work of the bureau, which it now does, more room is needed and still more will be needed as its staff of experts and clerks is increased. There is now need for more and better arranged space for the bureau's library, which is increasing from year to year. The Nation needs an educational museum, a kind of perpetual educational exhibit in which there may be found at any time, properly arranged and catalogued, typical courses of study, samples of school furniture and equipment of all kinds, specimens of school work, plans and photographs of buildings, grounds, and whatever else will be helpful in enabling students of education and school officers and teachers to gain an accurate and comprehensive knowledge of purposes, methods, and results of education in this and other countries, and assist them in forming ideas for the improvement of their own schools and school work. This museum should, of course, be under the direction of the Bureau of Education and constitute an essential part of its equipment. I therefore renew the recommendation contained in the commissioner's statement for 1915 that plans be considered at once for the erection of a building that will afford ample room for the work of the bureau and allied activities of the Government, house the bureau's library, and furnish ample room for such collections of materials as those mentioned above.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

CHAPTER I.

GENERAL SURVEY OF EDUCATION.

By W. CARSON RYAN, Jr.,
Editor, Bureau of Education.

STATISTICAL GROWTH.¹

The number of persons enrolled in educational institutions in the United States is increasing at an average rate of half a million annually, on the basis of statistics compiled by the Bureau of Education. In 1910 the enrollment was 20,616,338; in 1913 it was 21,632,513; in 1914, 22,462,342; and in 1915 (partly estimated), 22,929,677. It would therefore be safe to say that during the past year there were 23,500,000 persons attending schools of some kind, and that for the year 1916-17 the figure will go well above 24,000,000. This would mean that approximately 24 per cent of the inhabitants of the United States are attending school, as compared with 19 per cent in Great Britain, 17 per cent in France, 20 per cent in Germany, and a little over 4 per cent in Russia. Obviously it is not intended that such a comparison shall be strictly interpreted. It should also be noted that the result would be much less favorable to the United States if daily attendance, rather than enrollment, formed the basis of the comparison, since some of the other nations have better attendance and a longer school term than the United States.

The following table shows the enrollment for four periods—1910, 1913, 1914, 1915.

Enrollment in educational institutions.

Class of institutions.	1910	1913	1914	1915
Elementary.....	18,339,828	19,064,787	19,561,292	² 19,866,658
Secondary.....	1,131,466	1,366,822	1,459,399	1,532,068
Higher institutions.....	340,628	361,270	378,845	403,548
Special schools ²	804,416	839,634	1,062,806	1,127,403
Total.....	20,616,338	21,632,513	22,462,342	22,929,677

¹ Figures are for the school year 1914-15 unless otherwise indicated. Medical-school and law-school figures are in part for 1915-16. For detailed tables the reader is referred to Vol. II of this report.

² Partly estimated.

IN PUBLIC SCHOOLS.

Of immediate public concern is the increase in elementary and secondary public enrollment. The number of pupils in public kindergartens and elementary schools rose from 16,898,791 in 1910 to 17,934,982 in 1914, or an increase of more than a million in four years. In the same period public high-school students increased from 915,061 to 1,218,804, and for 1915 the corresponding figure was 1,328,984. The total secondary enrollment, public and private, for 1915 was 1,484,028 students, an increase of 110,367 over the previous year. For several years the proportion of public-school pupils in the total enrollment, elementary and secondary, has remained about the same; elementary pupils in public schools constitute 92 per cent of the total elementary enrollment, and public high-school students are approximately 89 per cent of the total secondary enrollment. There were 13,929 public and private high schools in 1915. Of the 11,674 public high schools reported, 8,440 had full four-year courses, as compared with 8,275 in 1914, and an enrollment of 1,236,099 students (1,126,456 in 1914). Ninety-three per cent of all public high-school students are now in four-year high schools.

HIGHER INSTITUTIONS.

The number of students in some types of higher institutions has increased steadily; in a few fields, especially professional education, there has been a decrease due to the insistence upon higher standards.

Colleges.—There were 237,168 students in the collegiate and resident graduate departments of universities, colleges, and technological schools for 1915, as against 216,493 in 1914 and 184,712 in 1910. The bureau's statistical list for 1915 includes 563 colleges, a reduction of 4 as compared with 1914 and of 33 as compared with 1913. States and municipalities controlled 95 of these institutions and private denominations or corporations 468; the 1914 figures were 93 and 474, respectively.

Professional schools.—Students in the 123 law schools reported by the bureau in 1916 numbered 22,876, as compared with 21,923 in 1915, 20,958 in 1914, and 12,516 in 1891. There were 14,022 medical students in the 96 schools, a decrease of 2,898 from 1915. The number of medical graduates was 3,518, a decrease of 18. Theological schools had 10,588 students in 1915, as against 11,269 in 1914; there were 164 schools in 1915. Dentistry students increased from 9,315 in 1914 to 9,647 in 1915, the number of schools remaining unchanged.

Teacher training.—The number of students in public and private normal schools passed the hundred thousand mark in 1915. Besides the 100,325 students in normal schools, 25,721 students were reported in public high-school training courses for teachers and 5,952 in simi-

lar courses in private secondary schools, while 35,831 students in professional courses in education were reported by universities and colleges. The latter figure had not been called for in the previous years, so that a complete comparison for 1914 and 1915 is impossible. The increase, exclusive of the college and university figures, was 9,552, or less than 8 per cent.

TEACHERS.

Men and women teachers.—The number of teachers in the United States in 1914 was 706,152, of whom 169,029 were men and 537,123 women. In 1900 there were 163,999 men and 339,599 women; in 1910, 158,574 men and 471,633 women. The total number of teachers for 1913 was 683,415. In public elementary schools the number of men teachers decreased from 116,416 in 1900 to 89,615 in 1914; in the same period the number of women teachers in public elementary schools increased from 402,690 to 432,534. In 1900 teaching positions in public high schools were evenly divided between men and women; in 1914 there were 25,047 men, an increase of 14,875, and 32,862 women, an increase of 22,662.

Teachers' salaries.—The average annual salary of all teachers for 1914 was \$525, as compared with \$512 in 1913. The average salary is highest in the Western and North Atlantic States, with \$699 and \$696, respectively, and lowest in the South Atlantic States (\$329). It varies from \$234 in Mississippi to \$871 in California and \$941 in New York.

COST OF EDUCATION.

Expenditures for education in 1914, partly estimated, totaled close to \$800,000,000. An estimate, making due allowances for the intervening two years and for items necessarily omitted, would easily bring the nation's current educational expenditure to a billion dollars. Public elementary schools cost approximately \$500,000,000; public high schools, \$70,000,000; private elementary schools, \$52,000,000; private secondary schools, \$15,000,000; universities, colleges, and professional schools, \$100,000,000; normal schools, \$15,000,000.

Of the \$555,077,146 expended for public elementary and high schools in 1914, \$398,511,104 was by the North Atlantic and North Central States. The amount expended by the State of New York (\$66,000,000) was nearly twice that spent by the entire group of 9 States in the South Atlantic division, one-fourth more than the entire South Central division, and slightly less than the 11 States in the Western division. Pennsylvania is the only other State that expended more than \$50,000,000 annually for schools. Illinois spent \$39,007,314, Ohio \$35,172,950, California \$26,579,804, Massachusetts

\$25,492,292, and New Jersey \$23,284,096. Six States, New Hampshire, Vermont, Delaware, Wyoming, New Mexico, and Nevada, expended less than \$2,000,000. On a per capita basis Utah ranked highest, with an expenditure for education of \$10.07; Idaho expended \$9.66 per capita of population; North Dakota, \$9.62; Montana, \$9.50; Arizona, \$8.93; and Washington, \$8.89; while Mississippi spent \$1.48, South Carolina \$1.83, Alabama \$1.97, and Georgia \$1.98.

Gifts and bequests to education amounted to \$31,357,398 in 1914, of which \$26,670,017 was for universities and colleges, \$1,558,281 for theological schools, and \$1,495,773 for law schools. Since 1896 sums aggregating \$407,000,000 have been given to educational institutions by private donors.

EDUCATIONAL MOVEMENTS OF THE YEAR.

There have been few new developments during the year. The significant contributions of educational theory that have been made in the past quarter of a century appear at length to be working themselves out in practice. There seems to be a clearer vision as to the essential aims of education. Educational surveys have multiplied to a remarkable extent; almost no field has now been left untouched, and the latest findings in scientific measurement are being utilized in survey work. The health movement in education has experienced a notable stimulus from the preparedness situation and the demand for military training. Rural education has more and more enlisted the interest of the general public outside of professional circles and has clearly become a problem of administration and financing, rather than promotion. Vocational education is advancing slowly, but steadily, in a way that seems to afford the best possible guaranty of permanence.

SURVEYS AND INVESTIGATIONS.

So numerous and so varied have educational surveys and inquiries become that it is impossible to keep accurate account of them. Published reports from at least 30 such surveys were received by the Bureau of Education during the year. These include comprehensive studies such as the series of 25 volumes on Cleveland, Ohio, analyzing and describing every possible phase of the city's educational activity; the Denver survey, in five separate pamphlets and a supplementary section; the Minneapolis vocational survey, wherein the city's occupational needs and opportunities are set forth in detail; the Bureau of Education's survey of higher educational institutions in Iowa, which signalizes the re-entry of the Federal Government

into the educational survey field; the rural school sanitation surveys of the United States Public Health Service; the study of public education in Maryland, made by the General Education Board, conspicuous for the epoch-making legislation that followed it; several school garden surveys, representing an attempt to show the possibilities of gardening as a type of practical work in cities; a half dozen special city surveys, treating topics of school administration in Boston, Los Angeles, Salt Lake, Buffalo, and other cities; and an increasing number of "autosurveys" and surveys made by the local school authorities with the assistance of the instructional staff and students of departments of education in universities and colleges.

An impressive list of surveys and special investigations was under way at the close of the year. The Gary school system has been under scrutiny by the General Education Board on the one hand and the American Federation of Labor on the other. The division of educational inquiry of the Carnegie Foundation has continued its investigation of law schools, engineering, and normal schools. Indiana has inaugurated a State vocational survey. The Bureau of Education had under way or planned at the close of the year 12 State, city, or county surveys. In addition to the report on higher educational institutions in Iowa, already mentioned, bulletins containing reports of surveys in three other States have been issued by the bureau: A study of Educational Institutions in the State of Washington (including some review of the elementary-school situation); a report on Education in Wyoming, prepared for the use of the legislature in revising the school code of the State; and a report of a survey of the higher educational institutions of North Dakota. In the case of the Iowa and Washington surveys it is believed that certain fundamental principles have been laid down that will prove of inestimable value to many other States. The two-volume report by the Bureau of Education on colored schools, just issuing from the press, is the result of a three-years' study at first hand of private and higher educational facilities for Negroes, made in cooperation with the Phelps-Stokes Fund. The Bureau of Education has also completed all or part of the field work on the following surveys, reports of which are soon to be printed as bulletins of the bureau or as special reports: Nassau County, N. Y.; University of Nevada; Arizona (entire State); Delaware (entire State); Colorado (school administration and finance); San Francisco; and a few smaller cities, such as Webster Groves, Mo., and Elyria, Ohio. More surveys have been promised, but many requests have had to be refused.¹

¹ For a complete list of surveys completed and projected by the Bureau, see Commissioner's Introduction to this report; also the Annual Statement of the Commissioner of Education to the Secretary of the Interior, 1916.

MILITARY TRAINING.

The demand for military training has been heeded to a greater or less degree by a number of States. New York was the first to enact important military physical training legislation. There are two laws; one is an amendment to the military law providing for the creation of a "military training commission" and for instituting compulsory "military and disciplinary training"; the other is an amendment to the educational law providing for compulsory "physical training and discipline" for all children 8 years and over in all schools of the State, public and private. The important feature of the military amendment, aside from the creation of the military training commission, is the requirement that "all boys above the age of 16 years and not over the age of 19 years * * * shall be given such military training as the commission may prescribe for periods aggregating not more than three hours in each week during the school or college year." The military training commission as appointed consists of three members, the major general of the National Guard, the commissioner of education for New York State, and a specialist in physical training. The commission has appointed Dr. Thomas A. Story, professor of physical education in the College of the City of New York, as State inspector of physical training. A comprehensive program has been formulated for carrying out the provisions of the two laws.

The question of military training has been discussed from numerous angles during the year. Especially significant is the change in the attitude of the National Education Association, which replaced its previous resolutions on the evils of military training with a resolution adopted at New York City that clearly recognizes "that the community or the State may introduce such elements of military training into the school as may seem wise and prudent," yet asserts that "such training should be strictly educational in its aim and organization and military ends should not be permitted to pervert the educational purposes and practices of the school." One plan of military training now under discussion is the so-called Wyoming plan as developed by Lieut. E. Z. Steever in the high schools of Wyoming. Briefly, it provides "for the division of the school year for separate intensive school periods, boys to be taken into camp each week end in order that they may be hardened to the rigors of camp life and learn useful facts as regards sanitation, cooking, woodcraft, simple field engineering, plains craft, castrametation, sketching, scouting, patrolling, the service of security and information."

Current opinion seems to hold that "military training in the schools conceived as military drilling is undesirable and unavail-

ing;" but that military training conceived as a "comprehensive program for physical, moral, and civic education" is desirable and even necessary. There is a disposition on the part of school men, especially advocates of physical education and hygiene, to realize that the public's willingness to pay for certain things under the name of military training may well mean strides forward in health education that would not otherwise have been taken for many years.

EFFECTS OF THE WAR UPON AMERICAN EDUCATION.

The effect of the European war and the preparedness agitation in the United States shows to some extent in the figures for military drill in high schools. The 75 public high schools reporting military drill in 1914 increased to 119 in 1915, and the number of students in military drill from 8,702 to 14,481. There were 86 private secondary schools in 1914 with military drill and 113 in 1915, the number of students in drill increasing from 6,835 to 8,836. In 1915, therefore, 232 secondary schools had military drill, and there were 23,317 students taking military drill in these schools. The number of schools with military drill was less than 2 per cent of the total number of secondary schools, and the number of students in military drill was 3 per cent of the total number of boys enrolled in all secondary schools.

Officers' Reserve Corps.—A direct result of the preparedness agitation was the act of June 3, 1916, providing for a Reserve Officers' Training Corps—

which shall consist of a senior division organized at universities and colleges requiring four years of collegiate study for a degree, including State universities and those State institutions that are required to provide instruction in military tactics under the provisions of the act of Congress of July 2, 1862, donating lands for the establishment of colleges where the leading object shall be practical instruction in agriculture and the mechanic arts, including military tactics, and a junior division organized at all other public or private educational institutions, except that units of the senior division may be organized at those essentially military schools which do not confer an academic degree, but which, as a result of the annual inspection of such institutions by the War Department, are specially designated by the Secretary of War as qualified for units of the senior division, and each division shall consist of units of the several arms or corps in such number and of such strength as the President may prescribe.¹

The primary object of establishing units of the Reserve Officers' Training Corps is to qualify by systematic and standard methods of training students at civil educational institutions for reserve officers.

Americanization movement.—More marked is the direct effect of the war in stimulating what has come to be called the Americanization movement. When the Bureau of Education in 1914 began a

¹ War Department G. O. 49.

national investigation of facilities of the education of aliens, few standards existed, practically all methods were in the experimental stage, there was lack of cooperation between existing public agencies and numerous private agencies were exploiting the field of immigrant education extensively. Progress since 1914 has been rapid and definite. Governmental authorities everywhere—city, State, and Federal—have begun to provide adequate facilities. The Federal Government, especially the Bureau of Education, has come to take the stand that “inasmuch as admission of an immigrant to the United States, together with his admission to citizenship, are both Federal matters, then, equally, is interest in his training for life and citizenship in this country a Federal matter.” Legislative provisions making the establishment of evening schools optional on the part of local boards of education have been passed in the principal immigrant States, such as California, New Jersey, New York, Ohio, and Wisconsin. The California law of last year provides for the appointment of “domestic educators” by local boards of education. These educators are to go from house to house, especially in foreign sections, for the purpose of training the mothers and children in the rules of health, sanitation, and hygiene, the principles of buying food and clothing, the English language, civics, and other appropriate subjects. One city, Rochester, N. Y., has a director of immigrant education and has made remarkable progress in its Americanization work.

Education and industrial efficiency.—Not the least of the effects of the European war in the United States has been the resulting realization on the part of business men, political leaders, and the public generally of the essential interrelation between education and industrial organization. Germany's example has impressed neutrals the world over. This realization has undoubtedly done more for vocational education at State and Federal expense than years of academic discussion and experimentation could have done.

VOCATIONAL EDUCATION.

The Smith-Hughes bill providing Federal aid for vocational education passed the Senate without a dissenting vote in July, 1916. Vocational training for soldiers in service had already been provided in the Army bill passed by Congress in May, 1916. The passage of the Federal child-labor law also represents an essential step in the establishment of a national system of vocational education.

There has been no change since the last report in the number of State systems of vocational education; in the States that have organized departments of vocational training on a State-wide basis the greatest progress seems to have been in the development of the day-continuation school for young employed workers. Other significant

features of progress in vocational education are: Recognition of the importance of proper machinery for insuring a supply of adequately trained and certificated teachers; renewed emphasis on the cultural possibilities of vocational education and the necessity of thorough grounding in the fundamentals of education; discussion and actual development in "prevocational" education; a decreased interest in the "unit versus dual control" controversy, the preponderance of opinion appearing to be against the organization of special independent boards for the control of vocational education; and a further development of interest in vocational guidance by the public school and the resulting beginnings of modification of school methods and courses of study. Schools are more and more examining critically the aims of vocational instruction in all fields. A recent investigation by the bureau shows that 2,175 high schools report the teaching of agriculture. Of these, 1,521 declared they are teaching agriculture primarily as an informational subject and 566 primarily as a vocational subject. Approximately 1,000 of the 2,254 teachers of agriculture in public high schools have had special training in agriculture.

RURAL SCHOOLS.

Definite advance is reported in rural school supervision and consolidation.

Supervision.—Louisiana and Maryland are two States with large rural population that have raised the qualifications for superintendents of schools who have charge of schools in rural districts. Maryland now has a State supervisor of rural schools, and the new law requires the employment of primary-grade supervisors for every county at a minimum salary of \$1,200, the State paying one-half of the salary up to \$2,000. Wisconsin has provided for the employment of "supervising teachers in each county"; counties with more than 125 schools may have two supervising teachers. In New Jersey the State commissioner of education is authorized to appoint in each county a "helping teacher" to assist teachers in the smaller schools. West Virginia increased its number of district supervisors from 62 to 82, and Mississippi and Alabama now require county superintendents to devote their entire time to the work. These are real advances in the long-neglected field of rural school supervision.

Consolidation.—Apparently more consolidated schools have been established in the past year than in any two previous years. In West Virginia 375 one-teacher country schools were replaced by larger schools. In Wisconsin the movement has resulted in the establishment of joint and union high schools which form, for practical purposes, consolidation centers, elementary education being taken care of in the local one-room district schools of the neighbor-

hood. New York State reports 100 new consolidated schools; Texas, 200; and Louisiana, 43, not including several schools established without State aid; Indiana reports 48 rural high schools commissioned during the year, all connected with rural consolidated schools; while 61 of the 110 consolidated schools reported in Missouri maintained high-school departments in 1915-16.

Better teachers.—Considerable progress has been made in solving the problem of better prepared teachers for the rural schools. Eight years ago fewer than 20 normal schools had specially organized departments for the preparation of rural school teachers; now 64 normal schools have such departments. Twelve States reporting teacher-training courses in secondary schools in 1913 have grown to 21 in 1916; this type of professional preparation is for the present of special importance for the rural schools. Especially significant for the problem of better teachers is the rapid growth of the "teach-erage" movement. Texas, Washington, and Oklahoma are States that report unusual progress in the building of teachers' cottages; Texas reports 191, Washington 144, and Oklahoma 70. In Mississippi a new law authorizes consolidated districts to levy taxes for teachers' homes.

Rural course of study.—Considerable attention has been given by Federal and State officials and by normal schools and university departments of education to the formulation of a course of study for rural schools based on what rural people ought to know. In 1913 the Bureau of Education began a study of what people who live in the country ought to know in order to be able to live wholesome, contented, and profitable lives "on the land or away from it, if they should become attracted by the call and move to city places." The agricultural leaders and rural-life experts who were asked to give their views were agreed that the school devotes too much time to acquiring the working tools of an education, that the subject-matter for the traditional school is still "cumbered with all kinds of unnecessary timber," and the methods of presentation inadequate, and that the schools do not devote time enough to the things which serve a real purpose. It was felt that every activity of the community should be reflected in the curriculum; that the farm, the fields, and the forest should be made laboratories for working material for the new schools. In the past three years the reconstruction of the rural school course of study to accord with these standards has gone forward to the extent that a number of important formulations by State teachers' associations, particularly of Minnesota and Iowa, have been made, and it should soon be possible to report the adoption of a newer course of study and newer methods in a definitely larger proportion of rural communities.

EDUCATIONAL HYGIENE.

The stimulus given to the educational hygiene movement by preparedness and the demand for military training has already been referred to. Health education has made other advances than in the field of activities due directly to the war. Among important recent aspects are "the broader and more philosophic conception of the scope and problems of physical education," and the demand for standards in this as in all other fields of educational endeavor. The practice of expanding the functions of the director of physical training or establishing a new office to cover most of the phases of educational hygiene is rapidly growing. Boston, New York, Kansas City, and Cincinnati are cities that have consolidated previously scattered activities. The integration of athletics and the teaching of hygiene with physical training is now complete in many school systems.

In the establishing of standards the attempt to formulate minimum essentials of physical education, which is to be the subject of the sixteenth report of the National Society for the Study of Education, is significant as representative of the views of a number of national organizations. More attention has been given to eye hygiene and ventilation than in previous years. The ventilation problem has come nearer solution as the result of a considerable amount of scientific experimentation.

In the rural school field a number of important tasks of investigation and promotion have been completed. Particularly noteworthy are the distribution of hundreds of thousands of pamphlets containing the essentials of rural school hygiene and sanitation; health surveys in rural schools, under the direction of the United States Public Health Service; and the increasing control of rural school-house architecture by the State school authorities.

Health inspection of rural school children is becoming a reality. In Pennsylvania, where medical examinations have become State wide, 2,134 rural school districts out of a possible 2,236 were inspected during 1914-15. Of the total number of children in the State, 335,427, or 71.48 per cent, were classed as physical defectives; 83,749 were found to have defective vision; 15,600 had defective hearing; 22,837 defective breathing; 12,322 defective tonsils; and 212,708 defective teeth.

OTHER MOVEMENTS.

Of other educational movements the junior high school and the Gary plan still appear to have affected educational discussion most notably.

The junior high school.—The junior high school movement has reached such proportions that careful investigation seems to be necessary to establish the claims made. Thus a survey by an Iowa superintendent of schools shows something like 209 junior high schools in the smaller cities alone. It seems probable, however, that many of the school principals who report the adoption of the "six and six" plan, or junior high school, really have only a more or less elaborated organization of departmental teaching. The problem is so important that the General Education Board has authorized a careful field study of institutions reporting themselves as junior high schools. In any event the six-six idea of school organization seems to be so firmly established that it will inevitably affect the school system of all the States in the near future.

The Gary plan.—The municipal authorities of the city of New York, where the Gary plan has been spectacularly on trial, have evidently decided in its favor, despite the more or less unfavorable attitude of the school officials. A large increase in the number of schools and the expenditure of millions of dollars in the furtherance of the Gary experiment were authorized for the school year 1916-17. Considerable educational pamphleteering has featured the New York situation. An attempt by the school authorities to establish a scientific evaluation of the Gary schools, in comparison with the traditional schools and the so-called Ettinger schools, was met by the issue of documents by the Public Education Association and others interested in the Gary plan, in which not only were the conclusions of the Buckingham report rejected but the scientific method was attacked.¹ In New York the promise held out by the Gary advocates that the plant will solve the part-time problem has had great weight, and similar considerations have operated in other localities with rapidly growing population.

Teachers' unions.—The organization of teachers' unions, affiliated with union labor, attempted on several occasions in the past, has become a reality. The Cleveland situation has remained more or less tense. In Chicago the teachers' federation incurred the hostility of the board of education to such an extent as to result in the removal of a number of teachers. The formation of the American Federation of Teachers has given stability to the movement for teachers' unions. The affiliation of this and other organizations of Government and professional workers with the American Federation of Labor is a movement that has gone on so quietly as to attract quite insufficient attention from the public.

LEGISLATION.

Eleven States held regular legislative sessions in 1916. The most extensive changes in school law were made by Maryland, following

¹ For a discussion of this situation, see Ch. III.

a State-wide survey. The new Maryland law tends to eliminate partisan politics from State and county school administrations, raises the qualifications and salaries of teachers, superintendents, and other school officers, and exacts attendance for the entire period during which schools are in session for every child between 7 and 13 years of age, attendance at least 100 days for children 13 and 14 years of age, and attendance at least 100 days for all children 15 and 16 years of age who have not completed the work of the elementary grades.

In 1914 six States were without compulsory education laws of any kind, and six had laws that applied only partially. In 1915, it will be recalled, Alabama, Florida, South Carolina, and Texas passed compulsory laws, thus reducing the States without laws to two. In 1916 Georgia passed a compulsory attendance law, leaving but one State—Mississippi—without such a law. Louisiana made her partial compulsory law State-wide, and Maryland provided for a system of county attendance officers that should mean a notable improvement in the enforcement of the law.

Louisiana made a number of general changes in its school law in 1916. The State board of education was reorganized, the powers of the parish (county) board of education were more clearly defined, and provision was made for increased salaries for parish superintendents. The Legislature of Mississippi created a commission to prepare a complete code of school laws and report to the legislature of 1918. An illiteracy commission, similar to those in Kentucky, Alabama, and North Carolina, was also authorized. Maryland, Massachusetts, and New Jersey provided for the investigation of military training in the public schools.

The Federal child-labor law has been mentioned in another connection. Massachusetts extended the provision of its law relating to the employment of minors by the passage of three acts in 1916, one permitting the employment of women and minors for a limited time in certain seasonal occupations, another making possible the employment of minors between 14 and 16 years of age in vacation time, and a third authorizing part-time employment for children of this age who are pursuing cooperative industrial courses. South Carolina raised from 12 to 14 years the minimum age at which children may be employed in factories, mines, and textile establishments. Maryland's State child-labor law was changed in a number of particulars. The law now prohibits the employment of children under 14 years of age in any factory, mechanical establishment, office building, garage, boarding house, or in messenger service. In the more hazardous occupations minors employed must be over 16 years of age. An elaborate system of employment certificates is provided for.

EDUCATIONAL LITERATURE OF THE YEAR.

Some conception of the volume of educational literature for the year may be obtained from the number of entries in the Monthly Record of Current Educational Publications issued by the Bureau of Education. From February, 1915, to January, 1916, there were 1,790 entries, as compared with 2,094 entries for the corresponding period previously. Between February and December, 1916, 1,618 entries were reported, so that from five to six thousand books and articles on education have been issued during the past three years. Publishers' statistics credit education during 1915 with 237 books, as distinguished from unbound pamphlets, reports, articles, etc., a slight falling off from the year before.

It was noted in the last previous report on the subject¹ that much of the significant contribution to current educational literature is in the form of reports of surveys and investigations. Some of the surveys have already been indicated. Especially important as contributions to educational literature are the volumes of the Cleveland survey. Well written and attractively printed, these books may well serve as an example to other makers of educational reports. "Public Education in Maryland," by the General Education Board, and "Higher Educational Institutions of Iowa," by the Bureau of Education, are among other reports issued during the year that appear to have elements of permanence as educational documents. A large part of the material compiled in the survey work is later being issued in book form. This procedure, begun in the case of the New York school inquiry, has become fairly well established; witness Prof. Cubberly's recent books on school administration. The educational survey, after all, represents largely the application of accumulated theory and practice; it should therefore be a valuable medium for the formulation of educational doctrine.

In addition to the report of the Maryland survey, the General Education Board published during the year two pamphlets in its "occasional papers" series that have already caused widespread discussion—Flexner's "A Modern School" and Eliot's "Needed Changes in Secondary Education." A controversial literature of no mean dimensions threatens to develop from Dr. Flexner's concrete statement of certain advanced demands. The annual reports and bulletins of the Carnegie Foundation for the Advancement of Teaching have a deserved reputation for scholarly handling of important problems in education. Teachers' pensions and law schools are the two subjects on which material has recently been published. Bulletin 8, "The Case Method in American Law Schools," has had profound consideration from leaders in legal education, and Bulletin 9,

¹ Educ. Rep. 1914, Vol. I, Ch. I, p. 15.

"A Comprehensive Plan of Insurance and Annuities for College Teachers," seems destined to have a very decided effect on legislation establishing State pension systems for public-school teachers.

Among general educational writings should be mentioned John Dewey's "Democracy and Education," the author's most complete formulation of "the ideas implied in a democratic society" and the means of applying these ideas to the enterprise of education; and E. C. Moore's "What is Education." In the field of educational psychology, Judd's "The Psychology of the High School Subjects," Miss C. M. Meredith's "The Educational Bearings of Modern Psychology," and Freeman's "Experimental Education," may be noted. Publications relating to secondary education have been comparatively rare in the year under review; the lack will soon be remedied, however, with the appearance of the reports of the Commission on the Reorganization of Secondary Education, to be issued as bulletins of the Bureau of Education.

The literature of standards and tests has to its credit for the year the important papers in the Fifteenth Yearbook of the Society for the Study of Education; Starch, "Educational Measurements"; and Terman, "The Measure of Intelligence," besides numerous articles on tests for the various school subjects in educational periodicals and survey reports. Rapeer's "Educational Hygiene from the Public School Period to the University" contains chapters by leading specialists and is therefore a convenient summary of this important phase of education. Two books of widely differing scope in the general subject of play are to be recorded—Henry S. Curtis, "The Practical Conduct of Play," and Joseph Lee, "Play in Education." The kindergarten is treated from opposite angles in Nora Atwood's "Kindergarten Theory and Practice" and Kilpatrick's "Froebel's Kindergarten Theories Critically Examined." The Gary experiment, besides calling forth a large amount of pamphlet and periodical material, has produced at least one new book—Randolph S. Bourne's "The Gary Schools." Of special interest is Hall-Quest's "Supervised Study."

In vocational training and related fields publication has been mainly in the form of reports and pamphlets. The Minneapolis survey, like the Richmond survey, by the National Society for the Promotion of Industrial Education, exemplifies the survey type of vocational literature. Lapp and Mote, "Learning to Earn," summarizes the needs and possibilities of vocational education; Leavitt and Brown, "Prevocational Education in the Public Schools," is a practical book in an important new field; Smith, "Establishing Industrial Schools," in the Riverside Educational Monographs, is intended to help in the actual organizing of such schools. Particularly noteworthy in the manual arts field is the increasing number of

high-grade textbooks; this is especially important in a domain where textbook aids have hitherto been so inadequate. Content material has been emphasized in recent books in home economics; such books as Balddt, "Clothing for Women"; Mathewson and Newlands, "A Laboratory Manual of Foods and Cooking"; Greer, "Textbook of Cooking"; Sherman, "Food Products"; Locke, "Food Values"; and F. C. Gephart, "Analysis and Cost of Ready-to-Serve Foods," have made available much material that is needed for school and college courses in household arts. Important additions have been made to the list of books on vocational guidance: Bloomfield, "Youth School and Vocation," and "Readings in Vocational Guidance"; Davis, "Vocational and Moral Guidance"; Gowin and Wheatley, "Occupations"; and Hollingworth, "Vocational Psychology," should be mentioned.

Rural education continues to be discussed in numerous books and articles. Among the books that emerge for one reason or another are: Carver, "Organization of a Rural Community"; Bailey, "York State Rural Problems"; Pickard, "Rural Education"; Gillette, "Constructive Rural Sociology"; Kennedy, "Rural Life and the Rural Schools"; Foght, "The Rural Teacher and His Work." Prof. Carver's "Selected Readings in Rural Economics" is a type of educational compilation that might well be imitated in other fields. The rural school campaign has reached the state where a successful novel has been written about it and for it; it is worth while to note that Herbert Quick's "The Brown Mouse" will reach a far wider public than most writings on the rural school and will therefore render service where service is most needed.

Educational journalism has been enriched in the past two years by several new periodicals of high type, notably "Educational Administration and Supervision"; "School and Society," and "The American School." Changes in title are often significant: "The Kindergarten Review" has become "Kindergarten and First Grade," and "Manual Training and Vocational Education" becomes "The Manual Training Magazine."

Publications of the Bureau of Education.—During the year the Bureau of Education published, besides the 1915 report, 48 new issues of the bulletin and 9 reprint editions; 122 miscellaneous printed documents, including circulars and reprints of chapters from the annual report; and 478 multigraphed and mimeographed letters and circulars. The bureau's edition of the annual report was 20,000, of the bulletins 355,420, of the printed leaflets and circulars 337,700, and of the duplicated letters 1,127,000. These figures do not take into account the editions printed for congressional distribution and the large sales editions of bureau documents printed for the Superintendent of

Documents. Despite rigid economies in distribution the bureau's editions are soon exhausted. Of the 50 bulletins issued in the calendar year 1915, 17 were no longer available for free distribution by the bureau on June 30, 1916.

The bulletins issued during the year included: A statistical study of the public-school systems of the southern Appalachian Mountains, by Norman Frost; the schoolhouse as the polling place, by E. J. Ward; civic education in elementary schools as illustrated in Indianapolis, by Arthur W. Dunn; legal education in Great Britain, by H. S. Richards; statistics of certain manual training, agricultural, and industrial schools; the rural-school system of Minnesota, by H. W. Foght; schoolhouse sanitation, by W. A. Cook; State versus local control of elementary education, by T. L. MacDowell; the teaching of community civics; adjustment between kindergarten and first grade, by Luella A. Palmer; public, society, and school libraries; secondary schools in the States of Central America, South America, and the West Indies, by Anna Tolman Smith; opportunities for foreign students at colleges and universities in the United States, by Samuel Paul Capen; the extension of public education, by Clarence Arthur Perry; the truant problem and the parental school, by James S. Hiatt; a comparative study of the salaries of teachers and school officers; the school system of Ontario, by H. W. Foght; problems of vocational education in Germany, by George E. Myers; mathematics in the lower and middle commercial and industrial schools, by E. H. Taylor; free textbooks and State uniformity, by A. C. Monahan; some foreign educational surveys, by James Mahoney; the university and the municipality; the training of elementary-school teachers in mathematics, by I. L. Kandel; significant school-extension records, by Clarence Arthur Perry; advancement of the teacher with the class, by James Mahoney; school administration in the smaller cities, by W. S. Deffenbaugh; the Danish people's high school, by Martin Hegland; digest of State laws relating to public education, by W. R. Hood, S. B. Weeks, and A. S. Ford; health of school children, by W. H. Heck; education exhibits at the Panama-Pacific International Exposition, by W. Carson Ryan, jr.; placement of children in the elementary grades, by K. J. Hoke; kindergarten training schools; statistics of State universities and State colleges; reorganization of the public-school system, by F. F. Bunker; needed changes in secondary education, by Charles W. Eliot and Ernesto Nelson; problems involved in standardizing State normal schools, by C. H. Judd and S. C. Parker.

Other numbers of the bulletin included the Educational Directory for 1915-16, and the nine issues of the Monthly Record of Current Educational Publications. The directory, which originated as a chap-

ter in the Annual Report of the Commissioner, is now a 200-page document containing lists of Federal, State, city, and county school officers, names of executive officers of universities and colleges, normal schools, and professional schools, and lists of institutions and organizations affecting education. The Monthly Record, which began in 1912 as a brief circular of references to books and articles on education, has developed into a more or less complete guide to educational literature.

CHAPTER II.

EDUCATIONAL LEGISLATION.

By WILLIAM R. HOOD,
Division of School Administration.

By far the larger number of State legislatures meet biennially, and in odd-numbered years. In 1915 there were 43 States which held meetings of their legislative bodies. In 1916 only 11 States held regular sessions. Of these, 6—Georgia, Massachusetts, New Jersey, New York, Rhode Island, and South Carolina—hold annual sessions. The remaining 5 States whose legislatures met this year—Kentucky, Louisiana, Maryland, Mississippi, and Virginia—hold biennial sessions in even-numbered years. California held a special session. The volume of legislation enacted in 1916 was therefore much smaller than that of the previous year.

GENERAL ADMINISTRATIVE CONTROL AND SUPERVISION.

The most extensive changes made in the school law of any State in 1916 were those made by the Legislature of Maryland, following a State-wide survey. In enacting its new law, Maryland followed the present tendency to eliminate partisan politics and ex-officio membership from the composition of administrative school boards. The State board of education formerly consisted of the governor and State superintendent of education, ex officio, and six members appointed by the governor for terms of six years. The law provided that at least two members should be appointed from the minority political party. Under the provisions of the new law the State board of education will, after the expiration of the terms of the present incumbents, be composed of seven members appointed by the governor "from the citizens of the State," and the governor and State superintendent will cease to be members after the first Monday in May, 1918. In making his selection of members the governor must be guided solely by the character and fitness of persons appointed, but no person may be appointed to the board who is in any way "subject to its authority." The term of each member is to be seven years, one member's term to expire each year. Additional

powers and duties conferred upon the board are the regulation of schoolhouse construction; the standardization of schools; the regulation of the issuance of teachers' certificates and the conferring of degrees by educational institutions; the prescription of a course of study for elementary, high, and normal schools; and the direction of the biennial school census. In short, the general care and supervision of public education are intrusted to the State board. It is empowered to prescribe rules and regulations which, when enacted and published, have the force of law, if not inconsistent with the statutes. The board now appoints the State superintendent of schools for a term of four years and fixes his compensation. This officer was formerly appointed by the governor. He is the executive officer of the State board of education and is directed to execute its educational policies. An assistant State superintendent of schools, a supervisor of high schools, a supervisor of rural schools, a white supervisor of colored schools, and such other clerical and professional assistants as may be authorized by the State board are provided for in the law. A county board of education, composed of six members in a few counties and of three members in other counties, displaces the older board of county school commissioners and is given larger powers. The functions of the county superintendent are more clearly defined.

Louisiana is another State which made changes of a general nature in its school law in 1916. The most important change made was the reorganization of the State board of education. This board now consists of five members appointed by the governor for "overlapping terms," and the State superintendent of public instruction, *ex officio*. This body displaces a board composed of the governor, State superintendent, attorney general, and one citizen appointed by the governor from each of the congressional districts. It will be observed that Maryland, in reorganizing its State board, departed entirely from the policy of constituting it in part of members who were made such by virtue of the offices which they held. The Legislature of Louisiana removed the governor and attorney general from the board of that State, but the State superintendent was permitted to remain. School administrators differ in opinion as to the advisability of making the State superintendent, or chief executive officer, a member of the State school administrative body, but the difference would appear to be of small consequence, if the board's powers and functions are properly articulated with those of its chief executive officer. Of the 44 States having centralized administrative bodies in control of common schools or of State educational institutions, 28 have their State superintendents as members of such bodies and the remaining 16 are otherwise constituted. In laws enacted in recent years, however, the tendency has been to eliminate *ex-officio* member-

ship from the composition of State boards. The State board of education of Louisiana has general control and supervision of the public schools. In addition, it now controls schools for the blind and the deaf. The State superintendent is allowed such inspectors and supervisors as may be needed.

Noteworthy acts affecting local administration and supervision were passed in Virginia, Louisiana, New Jersey, and New York. The new law of Virginia relates to the office of division superintendent of schools, which for rural districts corresponds to the county superintendent in other States. The act fixes the minimum qualifications of such superintendents, of whom no educational qualifications have hitherto been required by law. A division superintendent must now hold a State teacher's license, the equivalent of a first-grade certificate, or must have already held the office of superintendent or been a teacher for such number of years as the State board of education may designate. In taking this step, Virginia falls into line with other States which for a number of years have been steadily raising the qualifications of county superintendents and like supervisory officers. Louisiana's law of 1916 leaves the composition of the "parish" (county) board of education as it was, but defines more clearly its powers and duties. The parish superintendent is chosen by the parish board as formerly, and the qualifications required of him remain the same, but provision is made for increasing his salary. The minimum salary allowed is now \$900 and the maximum is \$4,000, to be determined by the parish board. An act of the New Jersey Legislature authorizes the State commissioner of education to appoint, with the approval of the State board of education, a "helping teacher" to aid and direct the teachers of two or more school districts. The 1916 act of the New York Legislature provides for the change of the boundary lines of supervisory districts by resolution of the board of supervisors of the county. No provision was made in the older law for the alteration of the boundaries of such districts.

COMMISSIONS AND INVESTIGATIONS.

In Mississippi a commission created by the legislature of 1916 is empowered and directed to prepare a complete code of school laws and report to the legislature of 1918. A second commission in this State is the "illiteracy commission," whose purpose is to investigate and seek to remove illiteracy, particularly among adults. In Maryland the educational survey commission created in 1914 to investigate the educational needs of the State was continued by an act of 1916, and the scope of its work was enlarged to include the investigation of the higher educational institutions of the State.

Maryland also provided for the investigation of the subject of military training in the public schools, and Massachusetts and New Jersey made similar provision. A resolution of the Massachusetts Legislature is designed to effect the investigation by a special commission of agricultural education at the State agricultural college and the development of the agricultural resources of the State. An echo of the contention heard in some quarters that textbooks cost too much and should be printed by the State was heard in the Virginia Legislature. There a committee of five members was appointed to investigate and report on State printing, including the printing of books to be used in the public schools. The committee is directed to prepare a report and the State superintendent is required to have it printed. Kentucky, which was the first of the States to create an "illiteracy commission," but which failed to provide any appropriation for its expenses in the original act, now allows \$5,000 a year for the next two years. A 1916 act of Louisiana provides for an investigation into the education of blind and deaf Negroes.

PUBLIC SCHOOL SUPPORT.

The Legislature of Virginia passed several acts looking toward an increase of the school revenues. One measure gives the schools the benefit of an inheritance tax, while another gives them the benefit of delinquent-capitation taxes. A third provides that certain delinquent property taxes shall go to the schools. Still further support is allowed in "An act to authorize and empower the board of supervisors of any county to appropriate out of the general funds of said county to the public schools thereof a sum not to exceed 25 per cent of the amount collected for county purposes during the next preceding year." Senate bill No. 307, passed by the Legislature of Kentucky, enables any graded school district to levy, in addition to the 50 cents on each \$100 worth of taxable property and \$1.50 on each poll, a tax not to exceed "25 cents on each \$100 worth of taxable property in the district and an additional poll tax of \$1 for the purpose of maintaining the school and erecting and repairing buildings." A 1916 act of the Legislature of Mississippi (ch. 195) permits any rural school district to levy a tax for the purpose of supplementing the salary of the teacher or extending the school term. Under the old law, only districts containing at least 12 square miles could make such a levy. Act No. 432 of the Legislature of South Carolina provides that one-half of the proceeds of fees derived from hunters' licenses shall be appropriated to schools, except in three counties named in the act. A Maryland act of 1916 (ch. 377) repeals numerous joint resolutions and acts of previous legislatures, "the same being designed to repeal all continuing appropriations to col-

leges, academies, and schools included in what is commonly known as the 'academic fund.'"

SCHOOL ADMINISTRATIVE UNITS.

Mention has already been made of changes in county administration in Maryland and Louisiana. Other than these, enactments relative to the smaller administrative units were not very significant, but a few acts of other legislatures are of sufficient importance to warrant notice here. In Kentucky, House bill No. 92, as passed, provides that any graded common school may cease to operate as such by a vote of a majority of the legal voters of the graded school district; it is required that this vote be taken in the same manner as when the school was established. An act of New Jersey (ch. 230) provides that when two or more municipalities are consolidated into a single city the boards of education of such municipalities shall hold office until the following February, at which time the board appointed by the mayor shall take charge of the schools, and the school districts shall be merged into one. The Legislature of Mississippi (ch. 186) amended generally the law of that State relating to separate school districts. The new law provides for two kinds of separate districts, municipal and rural, and for tax levies, bond issues, the election and duties of trustees therein, and the transportation of pupils into separate districts. Any municipality or any unincorporated territory of not less than 16 square miles may, on petition of a majority of the qualified electors thereof, be organized into a separate school district. Petition is made to the mayor and board of aldermen in the case of a municipality, and to the county school board in the case of unincorporated territory. Provision is made for the annexation of rural territory to a municipality for school purposes, also for the consolidation of two or more municipal separate districts. A separate district is to be under the control of a board of five trustees chosen by the mayor and aldermen in a municipality and by the county superintendent in a rural community, but such superintendent must be governed by the wishes of a majority of the qualified electors of the district.

The consolidation of rural school districts for the purpose of establishing graded or other more efficient schools is a subject which is constantly before legislatures. Chapter 180 of the acts of Mississippi provides that when the county school board consolidates two or more districts transportation for pupils may be provided at public expense. On petition of a majority of the qualified voters of a consolidated district containing not less than 25 square miles, a tax may be levied in such district for the support of schools. A significant feature of this act is the provision for teachers' cottages, consolidated districts being authorized to levy taxes for this purpose. The new "general

education bill " which passed the Legislature of Louisiana authorizes the parish (county) school board to divide the parish into districts, to consolidate districts, and to provide transportation for children residing more than two miles from school. The new school code of Maryland (ch. 506) confers similar powers upon county boards of education in that State.

COMPULSORY SCHOOL ATTENDANCE.

It was pointed out in Chapter I of the Annual Report of the Commissioner of Education for 1915 that compulsory attendance laws were at that time found on the statute books of every State except two—Georgia and Mississippi. Efforts were made to secure the enactment of attendance laws in both of these States in 1916, and in the former the effort was successful. The new law of Georgia, in brief, requires the attendance of every child between 8 and 14 years of age for four months each year. Exemptions from this requirement apply to those who have completed the fourth grade of school work; those upon whom needy members of the family are dependent for support; those whose parents or guardians are unable to provide the necessary books and clothing, unless the same are otherwise provided; those whose services are needed for farm emergencies; those who are mentally or physically incapable; and those who reside more than 3 miles from school. Boards of education of counties and of cities and towns are intrusted with the enforcement of the law in their respective jurisdictions.

Louisiana, which already had attendance laws applying to New Orleans and to other cities of 25,000 population or more, made required attendance State-wide in extent by its act of 1916. Now every child between the ages of 7 and 14 who has not completed the work of the seventh grade must attend school 140 days each year, unless the school session is for a shorter period. The following are exempted from the operation of the act: Children who are mentally or physically deficient; those who have completed the elementary grades; those who reside more than $2\frac{1}{2}$ miles from a school of suitable grade, unless transportation is furnished; those for whom adequate school facilities have not been provided; those whose services are needed to support widowed mothers. The enforcement of the act is intrusted to parish boards and superintendents. An effort was likewise made in Virginia to make State-wide the application of attendance requirements, but the bill was defeated in the upper house of the legislature after having passed the lower house.

In Maryland the school board of the city of Baltimore is required under the new school code to appoint one chief attendance officer and not exceeding 18 assistants; in the counties, the county

board of education must appoint at least one such officer. Every child between 7 and 13 years of age must attend some public school for the entire period during which the schools are in session. The following exemptions are made: (1) Children receiving instruction elsewhere in studies usually taught in the public schools; (2) children excused by the superintendent or principal for "necessary and legal absence;" (3) children whose mental or physical condition is such as to render instruction inexpedient or impracticable. Every child of 13 or 14 years of age must attend school for at least 100 days in the year, and must attend for the entire term, if not lawfully employed. Every child 15 or 16 years of age must attend 100 days, unless he or she has completed the work of the elementary grades.

In order to facilitate the enforcement of its attendance law, Massachusetts provided in 1916 for the registration of minors. City and town school committees are required under the new law (ch. 102) to ascertain the name, age, and other essential facts respecting every child between 5 and 7, between 7 and 14, and between 14 and 16 years of age, and respecting minors over 16 years of age who can not read and write. A card giving these data must be kept for every child or minor. The attendance officer is required to examine these cards and see that children attend school as required by law. Supervisory officers of private schools must within 30 days report the enrollment of children of compulsory attendance age, and when any child withdraws from school must report the same within 10 days.

TEACHERS' CERTIFICATES.

The tendency constantly to demand higher qualifications of those who aspire to teach shows no abatement. About one-half of the States whose legislatures met in 1916 amended their laws relating to teachers' certificates. The Legislature of New Jersey added to the State board of examiners one assistant State commissioner of education. In addition to that officer, the board is now composed of the State commissioner, the principals of State normal schools, one county superintendent, and one city superintendent of schools. The board is authorized to examine teachers, grant State certificates, and revoke the same under rules prescribed by the State board of education.

The 1916 act of Kentucky amended its law relating to State normal schools so that the elementary certificate shall hereafter be granted upon not less than one year's normal-school work. For the intermediate certificate two years' work is required and for the advanced certificate three years' work.

Mississippi in 1916 followed the example of several other States in accrediting the work of normal schools and standard colleges and

universities which offer prescribed or approved courses in teacher training. Chapter 181 of the acts of the legislature of that State contains the following provisions: (1) That graduates of the State institutions of standard grade and of other colleges approved by the State board of examiners may obtain professional licenses without examination if such graduates have completed at least "nine hours of college work" in professional training for teachers; (2) that the State board of examiners may accept a teacher's credentials issued in another State and issue thereon a first-grade license if the qualifications of the applicant are shown to be at least equal to those required for the first-grade license in Mississippi; (3) that first and second grade licenses may be renewed for one year upon the holder's taking an approved course of study for six weeks. Another act of the Legislature of Mississippi raises the requirements of holders of teachers' licenses. Beginning September, 1917, the theory and practice of teaching and elementary algebra will be added to the subjects in which applicants for first-grade licenses must be examined; after September, 1918, advanced English, modern history, and general science will be added.

Maryland, in its new school code, amended generally its law relating to the certification of teachers. The law now provides for the following certificates and fixes the qualifications of their respective holders: (1) A certificate in administration and supervision, (2) a certificate in elementary school supervision, (3) a certificate in supervision of special subjects, (4) a high-school principal's certificate, (5) a high-school teacher's certificate, (6) a high-school teacher's certificate in special subjects, (7) an elementary-school principal's certificate, (8) an elementary-school teacher's certificate (first grade), (9) the same (second grade), (10) the same (third grade), and (11) an emergency certificate issued by the county superintendent of schools. Less radical changes were made in the new law of Louisiana. There the most important new provision was embodied in the "general education bill" and provided for the certification without examination of graduates of approved normal schools and colleges.

TEXTBOOKS.

The chief emphasis in textbook legislation in 1916 was on the furnishing of books free to public-school pupils. Maryland, Virginia, Georgia, and Mississippi enacted laws providing for free textbooks. In Maryland books were already furnished free, but the new law added "supplementary readers, materials of instruction, stationery, and school supplies" to the materials that are to be supplied free of cost to pupils. The new law of Virginia authorizes district school boards to provide free textbooks for all pupils in the public schools.

On petition of 25 per cent of the qualified electors of a school district, the question of furnishing books free must be submitted to an election, and if a majority of the votes cast are "for free textbooks," it becomes the duty of the county board of supervisors to levy a tax in the district to pay for the necessary books. The Legislature of Georgia passed—

An act to authorize boards of education of counties, cities, local school systems, separate school districts, and district agricultural schools to adopt school books, other than the regular basal elementary school books provided for by the uniform textbook law, from an approved list issued by the State board of education, and to purchase all school books and sell, rent, or furnish them free to pupils; to require publishers to file sample copies of all school books to be sold in the State with the State superintendent of schools; to require publishers to sell school books to public school authorities in this State at the lowest net wholesale prices given anywhere in the United States; to require publishers to give bond to the State; to provide punishment and penalties for the violation of this act, and for other purposes.

Chapter 179 of the acts of the Legislature of Mississippi extends the provisions of the uniform textbook law to books used in all public schools, including agricultural high schools, separate school districts, and county public schools, and authorizes local school officials to provide free textbooks. Adoptions are to be made by local authorities from approved lists furnished by the State department of education.

HIGH SCHOOLS.

Only a few acts relating to secondary education were passed in 1916, but some of these were of considerable importance. The new school code of Maryland made no substantial change in that State's high-school law. Maryland high schools are divided into two groups, according to length of course, number of teachers employed, enrollment, industrial courses offered, and the like, and teacher training may be given in approved schools of the first group. A new Kentucky act requires graded-school districts either to maintain a high school equal in rank to those required by law of county boards of education or to pay the tuition fees of qualified pupils in a standard high school. Another act of the same State provides for the maintenance of county high schools jointly by two or more adjacent counties.

The most noteworthy act relating to secondary education passed in 1916 was that of South Carolina. This act authorizes the trustees of any common-school district, or of an aggregation of adjoining districts, to establish and maintain a high school under regulations prescribed by the State board of education, which may provide for the inspection and classification of high schools. State aid is granted as follows: For two teachers, not exceeding \$500 per annum; for

three teachers, not exceeding \$600; for four teachers or more, not exceeding \$700. Additional appropriations may be made for pupils attending from outside the district and for meritorious work in agriculture, manual training, and household arts. A new feature in the State's high-school law is the provision for the establishment by the State board of education of teacher-training courses in not exceeding five high schools. It is provided that not more than one such course may be established in any one county, and State aid of not exceeding \$1,000 is granted for each approved course. Under the new law of Louisiana high schools must have the approval of the State board of education and practical industrial and agricultural training must be fostered.

HIGHER EDUCATION.

Two States in 1916 enacted laws regulating the conferring of academic degrees by educational institutions. An act of the Legislature of New Jersey (ch. 152) prohibits—

the conferring, by any school corporation, association, or institution of learning conducted within the State or by any officer or member thereof, of degrees, based upon proficiency or learning, without the approval of the State board of education, except in certain cases.

The act applies to all institutions except those which have conferred degrees within the State for 25 years or longer and those which are conducted under the public-school system of the State. In Maryland no public or private educational institution is now permitted to issue "any certificate, diploma, or academic, collegiate, professional, or university degree without having first obtained the assent of the State board of education."

Act No. 505 of the 1916 laws of South Carolina directs the State board of charities and corrections to investigate and report upon the—

financial condition of all persons, their parents, guardians, or other persons liable in law for the support and maintenance of such persons, who hold or apply for beneficiary scholarships or obtain or apply for free tuition in any of the State institutions for higher learning in this State.

Legislation affecting normal schools was enacted in New Jersey and California. In the former provision was made for the establishment of a State normal school at Elizabeth and for its control by the State board of education. The California act empowers the board of trustees of the San Francisco State normal school to dispose of the lands and building of that institution, to acquire a portion of the site of the Panama-Pacific International Exposition, and to locate the normal school on the new site so acquired.

AGRICULTURE IN THE PUBLIC SCHOOLS.

Reference has already been made in this chapter to the appointment of a special commission to investigate agricultural education at the Massachusetts Agricultural College and to provisions for industrial and agricultural training in one or two other States. There remain two enactments which deserve notice here. A Massachusetts act (ch. 185) authorizes any city to establish and maintain schools for instructing families and individuals, by means of day, part-time, or evening classes, in gardening, fruit growing, floriculture, poultry keeping, animal husbandry, and other branches of agriculture and horticulture. These schools must have the approval of the State board of education. The question of establishing such a school is to be determined by vote of the people of the city.

The act of South Carolina is unique in some respects. It makes an annual appropriation of \$5,000 to be expended in consolidated schools doing practical classroom and field work in agriculture. It provides that whenever the trustees of three or more approved school districts raise \$750 to be expended by the county board of education for agricultural instruction within their limits the districts thus cooperating shall be entitled to \$750 from the State. This fund must be used to pay the salary of a qualified teacher of agriculture, who is required to reside within the territory which he serves for 12 months in the year. He is to be employed jointly by the several district boards, the county board of education, and the State superintendent of schools, and his term is to be not less than three years. Each cooperating school must have an enrollment of at least 75 pupils, with an attendance of at least 40, employ three regular teachers, maintain a term of seven months, levy a local tax of at least 8 mills on the dollar, and provide a suitable building and equipment.

PHYSICAL TRAINING AND MILITARY DRILL.

Here, as in the preceding section, there are two enactments other than those already noted which deserve mention. An act of some importance was enacted by the Legislature of Louisiana. It provides for instruction in military science for boys in high schools, when practicable, for at least one hour a week. The adjutant general of the State is directed to prepare a pamphlet of information on the subject, which is to be placed in the hands of high-school teachers who are competent to give such instruction.

The most noteworthy laws enacted on the subject of military and physical training in the public schools were the two acts of the New York Legislature. The following summary of the provisions of these

acts was prepared by the law division of the State department of education at Albany.¹

There are two interrelated acts: One provides for physical training and discipline in the schools, and the other provides for military training outside of the schools. The first is chapter 567 of the Laws of 1916, which provides in substance that after the first day of September, 1916, all pupils above the age of 8 years in all elementary and secondary schools shall receive as part of the prescribed courses of instruction such physical training as the regents, after conference with the military training commission, may determine during periods which shall average at least 20 minutes in each school day. Boards of education and trustees of cities and school districts are directed to provide the prescribed instruction in the public schools thereof under the direction of the commissioner of education and in accordance with the rules of the regents of the university. Provision is made for the employment of a teacher of physical training by two or more contiguous school districts and the apportionment of the salary of such teacher among such districts. Where competent teachers are employed by cities and school districts for the purpose of furnishing physical instruction as provided in said chapter, the commissioner of education is required to apportion from the public moneys a sum equal to one-half the salary paid to each such teacher on account of instruction given in such courses but not exceeding \$600 on account of a single teacher during a school year.

The second, chapter 566 of the Laws of 1916, which relates to military and disciplinary training, provides for the appointment of a military training commission which shall advise and confer with the board of regents as directed in the above-described act in matters relating to physical training and discipline in the schools. After the first day of September, 1916, all boys above the age of 16 years and not over 19 years (except boys exempted by the commission) shall be given such military training as the commission may prescribe for periods aggregating not more than three hours in each week during the school or college year. A system of field training for boys is also provided.²

CHILD LABOR.

The State of Massachusetts extended the provisions of its law relating to the employment of minors by the passage of three acts in 1916. One of these permits the employment of women and of minors under 18 years of age for more than 54, but not exceeding 58, hours a week in establishments where the employment is by seasons, and empowers the State board of labor and industries to determine what employments are seasonal. Another act permits the employment of minors between 14 and 16 years of age in vacation time. A third permits minors between 14 and 16 years of age who are pursuing cooperative industrial courses to be employed for part-time by cooperating agencies. The 1916 amendment to the child-labor law of Rhode Island relates to the issuance of age and employment certificates of minors between 14 and 16 years of age who are employed according to law. It has the effect of requiring that the employment

¹ See also Ch. XIX, "Educational Hygiene."

² University of the State of New York, Bul. No. 623 (Law Pamphlet 3): "Educational legislation of 1916."

certificate be delivered to the prospective employer instead of the child, and of requiring the employer, when the child's employment ceases, to return the certificate to the officer who issued it. As did Massachusetts, New Jersey enacted a law which authorized the issuance of employment certificates to minors over 14 years of age who are employed and attending part-time schools. South Carolina raised from 12 to 14 the minimum age at which children may be employed in factories, mines, and textile establishments.

The Legislature of Maryland amended that State's child-labor law throughout. The law now prohibits the employment of children under 14 years of age in any factory, mechanical establishment, tenement house, office building, restaurant, bakery, barber shop, hotel, bootblack stand, public stable, garage, laundry, brick or lumber yard, in the construction of buildings, or as a messenger, or in any mercantile establishment, store, office, boarding house, place of amusement, or club. Children under 12 may not be employed in any canning or packing establishment. In the more hazardous occupations minors employed must be over 16 years of age. Any person employed under 16 must be provided with an employment certificate, which, on the termination of the child's service, must be returned by the employer to the person who issued it. These certificates are of two kinds: A general certificate and a vacation certificate. The officer issuing the general certificate must have the child's school record, a physician's certificate showing child's physical fitness, evidence that child is over 14 years of age, and a statement from the prospective employer showing the character of the employment contemplated. The minor applying for this certificate must appear in person before the issuing officer and show ability to read and write simple English sentences. The vacation certificate is to be issued only for the period when the schools are not in session and upon evidence that the child is over 14 years of age and is physically fit. The act also regulates "street occupations" in cities of 20,000 population or more.

WIDER USE OF THE SCHOOL PLANT.

Since the social and recreation centers in Rochester, N. Y., first attracted wide attention in 1907, the movement for the "wider use of the school plant" has spread well over the country. A number of States now have laws permitting schoolhouses to be used for community purposes, and in other States school boards have the power to permit such use without specific authorization of the law. Three States enacted laws on the subject in 1916. The Legislature of Rhode Island authorized the school committee of the city of Providence to permit the use of public-school property for community purposes at times when such use will not interfere with the work of the schools.

Chapter 227 of the Acts of the Legislature of New Jersey authorizes boards of education to permit the use of school property for athletic, social, civic, and recreational meetings and entertainments and for such other purposes as may be approved by said boards.

Maryland in 1916 made two provisions relating to this subject. One of these applies to the city of Baltimore. It authorizes the mayor and council of the city to use public school buildings and other public property belonging to the city for any public purpose which will not materially interfere with the use of such property for its primary purpose. The other provision applies to the remainder of the State. The principal section of this provision follows:

No schoolhouse shall be used for any other purpose than public-school purposes and school district meetings unless by consent of the county board of education: *Provided, however,* Whenever an application is made to the district board of school trustees, signed by 25 citizens in the school district where the said school is situated, requesting the use of the school building for a non-partisan gathering of citizens for the presentation and discussion of public questions or for other civic, social, or recreational activities, the said school authorities shall allow the free use of such school building or grounds of same for the purposes enumerated above: *Provided, however,* Said meetings shall be held during those hours when the school buildings are not being used for their principal purpose.

THE FEDERAL GOVERNMENT AND EDUCATION.

The most important law affecting education or child welfare which was enacted by the first session of the Sixty-fourth Congress was the Federal child-labor bill, "An act to prevent interstate commerce in the products of child labor, and for other purposes." Section 1, which contains the main provisions of this act, reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That no producer, manufacturer, or dealer shall ship or deliver for shipment in interstate or foreign commerce any article or commodity the product of any mine or quarry, situated in the United States, in which within 30 days prior to the time of the removal of such product therefrom children under the age of 16 years have been employed or permitted to work, or any article or commodity the product of any mill, cannery, workshop, factory, or manufacturing establishment, situated in the United States, in which within 30 days prior to the removal of such product therefrom children under the age of 14 years have been employed or permitted to work, or children between the ages of 14 years and 16 years have been employed or permitted to work more than eight hours in any day, or more than six days in any week, or after the hour of 7 o'clock p. m., or before the hour of 6 o'clock a. m.: *Provided,* That a prosecution and conviction of a defendant for the shipment or delivery for shipment of any article or commodity under the conditions herein prohibited shall be a bar to any further prosecution against the same defendant for shipments or deliveries for shipment of any such article or commodity before the beginning of said prosecution.

The Attorney General, Secretary of Labor, and Secretary of Commerce are constituted a board to make and publish rules and regulations for carrying out the provisions of the act. The more immediate

enforcement of the act is intrusted to the Secretary of Labor, and appropriate penalties are attached.

A few other acts of minor importance were enacted. A new law worthy of note is the "Act providing that Indian schools may be maintained without restriction as to annual rate of expenditure per pupil," but the proviso that such expenditure shall not exceed \$200 is added.

APPROPRIATIONS.

As will be seen from the statistics given below, the specific allowances provided by the Federal Government for the advancement of education in 1916-17 aggregate \$21,920,219.44, but the amount actually made available for the dissemination of knowledge is considerably in excess of this. Numerous appropriations made for sundry purposes contemplate the expenditure of a part for instruction of one sort or another, and these parts, owing to the wording of appropriation bills, can not be segregated. For example, the cost of expert and scientific investigations conducted by offices of the Government can not easily be separated from the expenses of administration. Army and Navy officers detailed to do instructional service of various kinds are paid from the appropriations for the pay of the Army and the Navy. A more specific example is found in the Army appropriation bill for the current year, wherein the item "for the necessary furniture, textbooks, paper, and equipment for the post schools and libraries" is included in an allowance of \$11,000,000 for "regular supplies, Quartermaster Corps." It is clear that Congress intended to leave to the discretion of the administrative authorities of the War Department the determination of the amount to be expended for "post schools," and the sum eventually to be expended can not now be foretold.

Within the limitations indicated above, the following figures will show for ordinary purposes what the Federal Government is doing for education.

Summary.

Department of State.....	\$31, 000. 00
Department of Justice.....	41, 776. 00
War Department.....	1, 435. 085. 52
Navy Department.....	1, 507. 796. 92
Department of the Interior.....	8, 683. 337. 00
Department of Agriculture.....	4, 508. 580. 00
Department of Labor.....	164. 640. 00
Library of Congress.....	883. 105. 00
Smithsonian Institution.....	¹ 654, 200. 00
District of Columbia.....	² 4, 007. 699. 00
Grand total.....	21, 920, 219. 44

¹ Includes \$50,000 to be paid from the revenues of the District of Columbia.

² One-half to be paid from the revenues of the District of Columbia.

*Student interpreters.**Department of State.*

Ten at the United States legation to China:	
Salaries -----	\$10,000
Tuition -----	1,800
Six at the United States embassy to Japan:	
Salaries -----	6,000
Tuition -----	750
Ten at the United States embassy to Turkey:	
Salaries -----	10,000
Tuition -----	1,250
Quarters (Japan and Turkey) -----	1,200
Total for Department of State -----	31,000

Department of Justice.

National Training School for Boys, Washington, D. C.:	
Salaries -----	\$34,276
Maintenance -----	10,500
Total for Department of Justice -----	44,776

War Department.

United States Military Academy:	
Pay -----	\$890,269.62
Current and ordinary expenses -----	159,330.00
Miscellaneous items and incidentals -----	57,740.00
Buildings and grounds -----	118,603.95
	<hr/> \$1,225,943.57
Army War College, Washington -----	19,700.00
United States Service Schools -----	35,350.00
Coast Artillery School, Fort Monroe -----	10,000.00
Army Medical Museum and Library -----	5,000.00
Engineer School, Washington -----	40,000.00
Instruction of officers or enlisted men of the National Guard at	
United States Service Schools -----	50,000.00
Special technical instruction of aviation officers -----	500.00
Buildings for post exchanges, schools, libraries, etc. -----	48,592.00
Total for War Department -----	<hr/> 1,435,085.52

Navy Department.

United States Naval Academy:	
Pay of professors and others -----	\$238,860.00
Expenses of departments -----	34,261.92
Commissary -----	61,400.00
Current and miscellaneous expenses -----	37,585.00
Maintenance and repairs -----	327,724.00
Rent -----	4,116.00
Buildings and grounds -----	70,000.00
Engineering experiment station -----	85,000.00
Dairy and farm -----	100,000.00
	<hr/> \$958,946.92

Reimbursing Massachusetts and New York City for marine schools.....	\$250, 000. 00
Naval War College, Rhode Island.....	38, 850. 00
Naval Training Station, California.....	70, 000. 00
Naval Training Station, Rhode Island.....	85, 000. 00
Naval Training Station, Great Lakes.....	80, 000. 00
Naval Training Station, St. Helena.....	25, 000. 00
<hr/>	
Total for Navy Department.....	1, 507, 796. 92

*Department of the Interior.**Bureau of Indian Affairs.*

Support of Indian day and industrial schools.....	\$1, 550, 000
Construction of buildings, etc.....	400, 000
Transportation of pupils (including \$5,000 for obtaining employment for Indian youths).....	72, 000
Instruction in farming, forestry, household duties, etc.....	425, 000
Encouraging industry and self-support among Indians.....	300, 000
Teachers, physicians, carpenters, etc., for fulfilling treaty stipulations.....	217, 600
Relief, civilization, and education of Seminoles in Florida.....	8, 000
Schools for Chippewas of the Mississippi in Minnesota.....	4, 000
Cherokee orphan training school, Oklahoma.....	40, 000
Common schools in the Cherokee, Creek, Choctaw, Chickasaw, and Seminole Nations and Quapaw Agency.....	275, 000
Day and industrial schools, Sioux Indians.....	200, 000
Support, civilization, and education of Pottawatomies in Wisconsin.....	7, 000
Indian schools:	
Fort Mojave, Ariz.....	42, 000
Phoenix, Ariz.....	135, 400
Truxton Canyon, Ariz.....	21, 200
Sherman Institute, Riverside, Cal.....	129, 500
Fort Bidwell, Cal.....	21, 800
Greenville, Cal.....	26, 400
Haskell Institute, Lawrence, Kans.....	148, 250
Kickapoo Reservation, Kans.....	16, 860
Mount Pleasant, Mich.....	73, 450
Pipestone, Minn.....	64, 675
Genoa, Nebr.....	91, 100
Carson City, Nev.....	62, 430
Albuquerque, N. Mex.....	97, 400
Santa Fe, N. Mex.....	92, 150
Cherokee, N. C.....	36, 000
Bismarck, N. Dak.....	56, 175
Fort Totten, N. Dak.....	82, 500
Wahpeton, N. Dak.....	63, 540
Chilocco, Okla.....	93, 250
Salem, Oreg.....	128, 700
Carlisle, Pa.....	152, 000
Flandreau, S. Dak.....	67, 500
Pierre, S. Dak.....	60, 750
Rapid City, S. Dak.....	83, 500
Utes, Utah.....	1, 800

Indian schools—Continued.

Washakie, Utah	\$832
Cushman school, Tacoma, Wash.....	50, 000
Hayward, Wis.....	51, 550
Tomah, Wis.....	56, 125
Total for Bureau of Indian Affairs.....	5, 505, 437

Bureau of Education.

Salaries for statutory positions.....	\$75, 200
Investigation of rural education and industrial education.....	35, 000
Traveling expenses.....	3, 000
Books, etc., for library.....	500
Investigation of school and home gardening.....	5, 700
Collecting statistics for special reports and circulars of information.....	3, 600
Purchase, exchange, etc., of educational documents, etc.....	2, 500
Educating natives of Alaska.....	200, 000
Support of reindeer stations in Alaska.....	5, 000
Printing Commissioner's Annual Report.....	25, 000
Total, Bureau of Education.....	355, 500

Miscellaneous.

Colleges of Agriculture and the Mechanic Arts (continuing appropriation)	\$2, 500, 000
Columbia Institution for the Deaf, Washington.....	221, 400
Howard University, Washington.....	101, 000
Total for Department of the Interior.....	8, 683, 337

*Department of Agriculture.**States Relations Service.*

Agricultural extension (Smith-Lever Act).....	\$1, 580, 000
Salaries.....	127, 540
Agricultural experiment stations (act of Mar. 2, 1887).....	720, 000
Increase to same (act of Mar. 16, 1906).....	720, 000
Administration of above-named acts and of "Smith-Lever Act".....	58, 500
Farmers' cooperative demonstrations (outside of the cotton belt).....	478, 240
Farmers' cooperative demonstrations, including eradication of boll weevil.....	661, 300
Farmers' institutes.....	20, 000
Agricultural experiment stations in Alaska, \$48,000; Hawaii, \$40,000; Porto Rico, \$40,000; Guam, \$15,000.....	143, 000
Total for Department of Agriculture.....	4, 508, 580

*Department of Labor.**Children's Bureau.*

Salaries.....	\$106, 640
Other expenses.....	58, 000
Total for Department of Labor.....	164, 640

Library of Congress.

Services and general library expenses	\$270,660
Copyright office	104,440
Legislative reference	25,000
Distribution of card indexes	43,000
Temporary and extra services	4,800
Carrier service (Senate and House Office Buildings)	960
Sunday opening	10,000
Increase of library	100,000
Contingent expenses	7,300
Library buildings and grounds	86,945
Fuel, lights, repairs, etc	20,000
Furniture	10,000
Printing and binding	200,000
Total for Library of Congress	883,105

Smithsonian Institution.

International exchanges	\$32,000
American ethnology	42,000
Catalogue of scientific literature	7,500
Astrophysical Observatory	13,000
National Museum	25,000
Heat, light, etc	46,000
Continuing exhibition and increase of collections	300,000
Books, pamphlets, and periodicals	2,000
Repairs	10,000
Stamps and foreign postal cards	500
Printing and binding	76,200
Total	\$554,200
National Zoological Park (one-half payable by the District of Columbia)	100,000
Total for Smithsonian Institution and Zoological Park	654,200

District of Columbia.

[One-half is paid by the General Government and one-half by the District of Columbia.]

Free public library	\$79,060
Public schools:	
Officers	\$59,000
Attendance officers	2,100
Teachers	1,443,200
Vacation schools and playgrounds	7,000
Librarians	17,350
Longevity pay (officers and teachers)	475,000
Allowance to principals	35,000
Night schools	27,000
Industrial and commercial classes	3,000
Kindergarten supplies	3,000
Janitors and care of buildings and grounds	184,470
Medical inspectors	9,000

Public schools—Continued.

School nurses	\$4, 500
Miscellaneous	430, 070
Buildings and grounds	1, 067, 659
Total for public schools	\$3, 767, 329
Columbia Institution for the Deaf (deaf persons, District of Columbia)	13, 200
Colored deaf mutes	2, 400
Indigent blind children	7, 350
National Training School for Boys (committed from District of Columbia)	65, 000
National Training School for Girls	45, 980
Industrial Home School for Colored Children	20, 880
National Library for the Blind	5, 000
Columbia Polytechnic Institute (for blind)	1, 500
Total for District of Columbia	4, 007, 699

CHAPTER III.

EDUCATION IN THE LARGER CITIES.

By JAMES H. VAN SICKLE,
Superintendent of Schools, Springfield, Mass.

Under the influence of the European war old problems in American education are being reformulated and revitalized and new problems are being created. Three problems that affect particularly the larger communities have felt its stimulus. They are—

- I. The problem of the relation of education to industrial efficiency.
- II. The problem of the Americanization of the immigrant.
- III. The problem of military education in the schools.

The relation of these problems to some of the broader aspects of education and the attempts that have been made at their solution, particularly during the past year, will be the subject of some pages of this report.

I. THE PROBLEM OF THE RELATION OF EDUCATION TO INDUSTRIAL EFFICIENCY.

EDUCATION AND INDUSTRIAL EFFICIENCY.

The close relation between education and industrial efficiency and the resultant relation between industrial efficiency and preparedness, both economic and military, have been clearly established by the experience of the warring powers of Europe. Hence the agitation for "educational preparedness" in America has taken on new proportions, not only among educators, but among all thoughtful people. Admiration for the industrial efficiency shown by some of the belligerents has made for the keenest analyses of American industrial efficiency—analyses not only of industrial efficiency for the solution of the Nation's problems when its economic rivals are at war, but analyses of potential industrial efficiency in the eventuality of war itself, and finally, analyses of potential industrial efficiency for competition with an industrialized Europe after the war.

INDUSTRIAL EDUCATION AND DEMOCRACY.

The need for greater industrial efficiency in America is apparent and educators generally recognize it. But the problem involved in providing an education that shall make for greater industrial efficiency seems, in the opinion of many educators, to touch the political principles on which American society rests. American educators realize, though not always sufficiently, that the industrial efficiency of Europe has, to some extent at least, been the outgrowth of an educational policy of an aristocratic character, and that through this policy the manual and industrial pursuits have been consigned to a laboring class which is *fixed*, or almost so. To superimpose on American education a European educational system thus conceived, with its differentiation of the common schools and its caste distinctions, would do violence to the tenets of a democracy.

THE PROBLEM OF READJUSTMENT.

The readjustment of education to meet the industrial needs of the time must insure the conservation of democratic principles. The resultant education must not foster and strengthen class distinction, and must not close the door of equal educational opportunity. The problem involved in this readjustment is firmly and inevitably linked up with the larger problem of the relation of education to all the needs of America. Its discussion has been animated, and educators are far from being of one mind as to its best solution. The problem to be solved may be stated thus:

How may a unified, public-school education be maintained that shall be for all, without distinction of classes; that shall provide for the needs of the great majority from which the industrial workers are drawn, as well as for the small minority who prepare for higher academic work; and that shall do all this, at the same time conserving equal opportunity for all and predestining the social class of none?

THE RELATION OF THE TRADITIONAL AND THE PREVOCATIONAL SCHOOLS TO THIS PROBLEM.

The traditional school, its critics argue, has failed lamentably to meet the requirements of an industrial age. It is, to be sure, maintaining a unified education, but only by refusing to recognize the wants and needs of that 90 per cent and more who do not finish the high school and continue to more advanced work. It has thus, consciously or unconsciously, made for class distinction by legislating a curriculum for one class. The defender of the traditional school admits that industrial education per se plays no part in his curriculum, but he is convinced that a curriculum composed of what he

terms "fundamental subjects" is the best background for American society, even as at present constituted. He holds that formal discipline still exists, in spite of the researches of many psychologists, and he protests against the supplanting of a fundamental course by this or that prevocational or vocational course. He argues, further, that, although his curriculum does not include prevocational or vocational courses in the narrower sense, it ought not to be condemned as undemocratic, for by establishing a common background for all students it must surely make for democracy, and, besides, it offers the freest opportunity for the highest intellectual development of any child, regardless of the social class from which it springs.

The proponents of the Gary system claim for their schools the solution of the problem. Their educational system is unified in character, yet it ministers to the wants of the whole community. The industrial class, so long neglected educationally, is now given the share in education that belongs to it by virtue of its numerical strength and economic importance in the community, while the one-tenth that continues through the high schools in the more academic work is not neglected. It breaks down class distinction and engenders social sympathy. The critics of the Gary plan are loathe to concede all these claims. They fear that the Gary plan fails to some extent in its purpose of democratizing education. They assert that surrounding the children of the laboring class with industrial laboratories will but inevitably commit them to industrial pursuits and shut them off from high attainment in the professions and other intellectual pursuits, even though they possess the talent and mentality for such careers. Then, too, the critics of this system are jealously concerned with the preparation of the small minority that goes to high school and college. They question whether the time spent in prevocational work of an industrial character is not spent at the sacrifice of the subjects that they consider fundamental to advanced academic work. They profess allegiance to democratic principles, but they contend that the civilization of a democracy will be measured not only by the general intelligence and material happiness of its mass, but also by the outstanding achievements of its intellectual leaders. They ask, therefore, that before a plan such as the Gary plan—which demands the supplanting of the current system of education—be put in general adoption it be thoroughly tested on such mooted points.

A prevocational plan that provides for a junior high school, or differentiation in the last two grammar grades, is advanced by many as best meeting the objections of the critics of the traditional system and the Gary system. It provides for six years of work of a fundamental character for all students, and two or three years of either

prevocational training of a rather intensive character, or two or three years of additional work in the "academic" fundamentals. It has been violently attacked, not the less violently because it is the middle-of-the-road course. Six years, the conservative educator argues, is not enough for the fundamentals or for a common, and hence democratizing, educational background. The advocate of the Gary plan argues that by segregating pupils after six years into two distinct divisions the junior high school makes for class distinction, and that democratic principles demand that its rapid spread be curbed.

Such are some of the problems involved in the question of the relation of industrial education to a democracy. When the advocates of the three types of schools criticize the other two for a failure to adhere to democratic principles, it is certain that every attempt will be made to preserve democratic ideals; but it is none the less certain that there must be a scientific evaluation of the systems with respect to their relation to a democracy, as well as with respect to the more concrete and tangible phenomena that they present.

EVALUATION OF THE PREVOCATIONAL SCHOOLS (GARY AND ETTINGER) IN NEW YORK CITY.

The first attempt at an evaluation of the prevocational schools in New York City is contained in a report of the Gary and Ettinger schools made by Mr. B. R. Buckingham, chief statistician of the board of education, in the year 1915 and published in 1916. The interest that it aroused both in New York and throughout the country has made it apparently one of the outstanding educational events of the year. The publicity given to it has stimulated anew agitated discussion as to the merits of the newer systems.

The report gives the results of examinations conducted in March and in June, 1915, in two Gary, six Ettinger schools (schools with differentiation in last two grammar grades as described on p. 41 above), and eight traditional schools in certain fundamental subjects—arithmetic, spelling, geography, history, English grammar. The object of the test and its results may be quoted from the letter of transmittal of Mr. Maxwell to the board of education, accompanying the Buckingham survey:

The design of these tests was to determine how results in those studies which all thinking people agree should form the chief field of elementary education compare in the three types of elementary schools—the traditional type, the Ettinger type, and the Gary type. The schools of the traditional type were selected each because it has a pupil population as nearly as possible similar to that in one of the two other classes of schools.

Two examinations, separated by an interval of three months and with questions as nearly equivalent as possible, were given, in order that the test should be not only one of acquired knowledge but also one of progress.

The results show that, of the three types, the traditional schools made the best showing, the "prevocational" schools stood second, and the Gary schools stood third.

While I would be the last to claim that this test is final or that it renders an effective decision against the Gary system for this city, it is fair to say that it raises a strong presumption against the general introduction of the Gary system into this city. The conclusion obviously is that neither the Gary system nor the "prevocational" system should be further extended until the schools in which they are being tried make a better exhibition of efficiency. (Seventeenth An. Rep. of City Supt. of Schools, New York City; Survey of the Gary and Prevocational Schools.)

In his Seventeenth Annual Report Mr. Maxwell declares:

One pupil out of every four or five pupils in our elementary schools is already in a class which uses a room with another class. That is, two classes occupy one room at different times on the same day. As the use of each classroom at different hours on the same day is the central principle of the Gary plan, it follows that the relief afforded in the accommodation of pupils by the general introduction of the Gary plan would be much less than has been asserted. * * *

The claim made before the board of estimate and apportionment that the general introduction of the Gary plan of school administration would greatly reduce the cost of operating schools is a mere figment of the imagination. This claim, which is the basis of the defense of that board's action in cutting down the budget of the board of education for 1916, thereby causing the cessation of many of our most beneficent activities and depriving several hundred teachers of increases in salary to which they are entitled by law and justice, should not be heard again. The Gary system undoubtedly contains features which should be adopted as proof of their validity is forthcoming and as the necessary funds are provided. The presentation of claims on its behalf that this survey shows to be utterly baseless, however, has wrought great injury to our schools and to our people, because these claims have made it possible for the board of estimate and apportionment to reduce the educational budget below the amount at which many useful and necessary activities can be maintained.

THE REPLY OF THE ADVOCATES OF THE PREVOCATIONAL SCHOOLS TO THE BUCKINGHAM REPORT.

The Buckingham report immediately evoked lively interest and keen opposition. The proponents of the Gary school were quick to discover the vulnerable spots in it, and after examination they arrived at the conclusion that the Buckingham tests failed in the three essentials of scientific inquiry: (1) "An accurate conception of exactly what is being examined; (2) a thorough appreciation of the conditions under which such an inquiry can be fairly conducted; and (3) a careful and just appraisal of the data collected."

This conclusion is based on criticisms of the report such as the following:

To assume that, after six or more years of educational experience, progress in general ability during a period of three months results solely from the training received during that period would seem, on its face, fallacious. Yet that

is exactly what Dr. Buckingham has done. Public School 45, The Bronx, was a traditional school up to within three weeks of the first test in March, and was still in process of readjustment during that period immediately following, in which the growth in ability due to the Gary plan was supposed miraculously to take place. Public School 89, Brooklyn, was also a traditional school up to within four months of the March test and was likewise undergoing readjustment. Both schools, also, had suffered far more acutely from part time before reorganization than any of the other 14 schools tested. It would therefore seem that what Dr. Buckingham was really testing was not the Gary plan at all, but simply two schools which had been operating for six or seven years under the traditional New York program and under extremely congested conditions.

Furthermore, it is contended that the Gary schools were handicapped by a lack of physical equipment regarded as essential to their favorable operation, that the organization was necessarily imperfect, that the stream of visitors in the classroom and about the building was distracting, and that "it would, therefore, seem that these tests were not only extremely inopportune, but, as an evidence of undue haste in attempting to 'evaluate' the Gary schools, were scientifically indefensible."

Not the least serious count in the indictment of the Buckingham report is the calling into question of the statistical method employed.

[Dr. Buckingham] compared the average results of only two Gary schools with the average results of six Ettinger and eight traditional schools. It is obvious that in this way the difficulties of a particular Gary school would exert a far greater weight than would similar difficulties in a school in either of the other groups, where there were enough instances to counterbalance poor results in any particular case. This made it possible for Public School 45, the larger of the two Gary schools, which showed poorer results in the tests, to more than offset the excellent results of Public School 89, the smaller of the two, and thus lessen materially the average for the Gary schools.

The interpretations of the statistics contained in the report by the advocates of the Gary schools are—

that the Gary schools, in spite of tremendous odds, make an exceptional showing; that Public School 45 excels its companion school in all subjects and all grades except one; that Public School 89 excels all other Brooklyn schools tested, and that the Buckingham tests are gratifying to the supporters of the Gary plan.

A review of the evidence in the case will modify radically the interpretation of some of the findings of the Buckingham report; it will emphasize the inconclusiveness of much of the data found, and will hold the whole matter in abeyance pending other evaluations scientifically undertaken and corrected by just criticism 2, 4, 10, 20, and 30 years after the introduction of the new schools. It will give careful consideration to the administrative and financial difficulties involved in the introduction and adaptation of such schools to New

York as published from time to time by the superintendent of schools of New York City, and it will not confuse the issue by identifying for all purposes the question of the Gary schools in Gary with that of the Gary schools in New York.

In the meantime one can only deplore the fact that the whole pre-vocational question in New York City has become a matter not alone of educational, but of political propaganda. The further increase of the Gary schools by the city administration over the recommendation of the city superintendent, the heated controversies of the advocates of the Ettinger schools and the Gary schools, and the injudicious attacks of the proponents of the Gary schools on the traditional schools can only serve to aggravate the difficulties inherent in a great educational problem, a problem that calls as never before for scientific investigation and deliberate progression.

II. THE PROBLEM OF THE AMERICANIZATION OF THE IMMIGRANT.

Under the influence of considerations arising from the European war the attention of educators has been directed with insistence to the problem of Americanizing the immigrant. For years this problem has constituted one of the major problems of American life, and in its solution the public schools have always been regarded as the most effective agency. The welding together of foreign elements of the population has gone on in the schools, and little or no special attention has been given to the formation of modes of procedure that would tend to accelerate the process. Wherever attempts have been made through local political legislation to deal with particular aspects of the problem (Bennett law in Wisconsin) the process, instead of being accelerated, has only been retarded. Measures to Americanize of a coercive character, real or imagined, are fraught with difficulty. In the opinion of American educators, the most effective agency in the process will continue to be the public day-school system, with the quiet, effective means at its disposal.

The problem, however, is one that the public school system can not solve with its day schools alone. What of the thousands of immigrants who have passed the school age? The ever-increasing number of immigrants from countries with both language and customs different from our own urges the serious study of the problem of Americanizing them. With a realization of the necessity of calling the attention of educators to this problem, the Bureau of Education has prepared a report on the evening school expenditures of the leading American cities.¹

¹ See Immigrant Education, Letter No. 4; also Bull., 1916, No. 18, Public Facilities for Educating the Alien, by Frederic E. Farrington.

TABLE 1.—*Evening school expenditures of the 21 leading cities of the United States, arranged in order of their per capita expenditures on the basis of total population, 1914-15.*

Cities.	United States census estimate, 1914.		Expenditure.	
	Popula- tion.	Rank.	Amount.	Per capita.
Newark.....	389,106	15	\$172,291	\$0.443
Los Angeles.....	452,140	12	120,380	.266
Buffalo.....	457,723	10	111,000	.242
San Francisco.....	452,255	11	107,500	.238
Pittsburgh.....	561,878	8	105,000	.186
New York.....	5,333,539	1	926,215	.174
Kansas City.....	234,567	21	40,000	.141
Detroit.....	546,183	9	65,000	.119
Chicago.....	2,397,600	2	244,744	.102
St. Louis.....	737,497	4	75,000	.102
Seattle.....	313,029	19	130,000	.096
Cleveland.....	639,431	6	58,819	.092
Cincinnati.....	402,175	14	35,504	.088
Boston.....	734,747	5	63,000	.086
Minneapolis.....	343,466	18	27,154	.079
Philadelphia.....	1,657,810	3	121,202	.073
New Orleans.....	361,221	16	22,405	.061
Jersey City.....	293,403	20	17,661	.060
Milwaukee.....	419,589	13	24,000	.057
Washington.....	356,028	17	20,000	.056
Baltimore.....	579,590	7	22,755	.039

¹ Figures for 1915-16.

The following data showing the total foreign-born population and the percentage of foreign born are from the census of 1910:

TABLE 2.—*Total and percentage of foreign-born population according to the 1910 report.*

Cities.	Total foreign born.	Per cent of foreign born.
Newark.....	111,007	32.8
Los Angeles.....	66,133	20.7
Buffalo.....	118,689	28.0
Pittsburgh.....	140,924	26.4
San Francisco.....	1,944,337	40.8
New York.....	10,381	12.6
Kansas City.....	157,534	33.8
Detroit.....	783,428	35.8
Chicago.....	126,223	18.4
St. Louis.....	67,456	28.4
Seattle.....	196,170	35.0
Cleveland.....	56,859	15.6
Cincinnati.....	243,365	36.3
Boston.....	86,059	28.6
Minneapolis.....	384,707	24.8
Philadelphia.....	28,333	8.4
New Orleans.....	77,697	29.7
Jersey City.....	111,529	29.8
Milwaukee.....	24,902	7.5
Washington.....	77,662	13.9
Baltimore.....		

In the light of these figures the question raised by the Bureau of Education needs all the emphasis that can be given to it. "What

consideration has been given the problem of Americanizing the foreigner in the formation of evening-school budgets?"

III. MILITARY TRAINING IN THE PUBLIC SCHOOLS.¹

The proposal to introduce military training into the public schools of America is the most startling of the effects of the European war on American educational problems. But three years ago the mere mention of a plan so revolutionary would have evoked general ridicule. To-day it forms part of the program of preparedness of many men in public life and of not a few educators. Its advocates urge its general adoption on the ground that it is essential to an adequate military preparedness. They contend that the physical education in the schools is ill-adapted to that purpose. They are convinced that the physical and moral effect of military training on the pupils sufficiently justifies its introduction, apart from the question of a trained citizen soldiery. Finally, they see as its results a stimulus for patriotism and democracy and a deeper realization on the part of the pupil of the responsibilities of citizenship, which include as a civic duty the responsibility of the defense of his country.

The agitation has resulted in State legislation providing for military education in New York; it has resulted in reshaping the 1915 attitude of the National Education Association—so unalterably opposed to every suggestion—in a resolution of 1916 that is commonly interpreted as a compromise, and there can be no doubt that the whole question will be up for discussion in educational circles for the next few years.

It is essential that a matter so revolutionary in American education be dealt with without emotion, in so far as that is possible. It is a problem fraught with dangers to vital interests of American life, and it needs to be detached from narrow political considerations and the shibboleths of a day.

Touching, as it does, all the school population of a certain age, its relation to the question of preparedness is wholly different from that, for example, of the size of a standing army. Since this school military training is to be compulsory for all, its relation to war emphasizes particularly its relation to the problem of peace. What, the opponents of the proposal ask, is to be said of such a plan as a preparation for peace, when it is too militaristic to be included in the military schemes of militaristic Europe? What guarantee of peace resides in introducing military drill as a curricular necessity for the youth of the land and thus developing military habits of mind? Thus the pacifists argue.

¹ See also Ch. XIX, Educational Hygiene. Table 24, in Vol. II, Ch. VIII of this report, gives statistics of military training in high schools, 1915.

Others, who do not call themselves pacifists, oppose its introduction on many grounds. They point to the fact that it is not in vogue in militaristic Europe, and that its military value must be negligible or very questionable. At any rate, they say, it should be the last, not the first, resort in a policy of preparedness. They point to the experience of high schools in support of their contention that such training does not adequately prepare. They are convinced that imposing anything as revolutionary as compulsory military education on schools and communities that are opposed to it might be subversive of the very end of the education proposed, and work untold harm to the general cause of education. They prophesy a speedy revelation of the futility of the Slater-Welsh laws in New York State.

They find themselves in accord with the demand for greater physical training proposed by the advocates of military training, and they see in the more general recognition of that need one of the tangible and splendid results aroused by the discussion of the problem. They ask for a reform of athletics, a raising of the standards, and a dignifying of the status and functions of directors of physical education. They are willing, too, to introduce some of the commendable features of the Boy Scout movement, and they agree with Dr. Dudley Sargent when he closes his opposition to military drill in public schools with the words: "What America most needs is some way of giving those physical advantages to the masses which she now lavishes on the favored few."

FUNCTIONS OF SCHOOLS BOARDS.

President Dwight's "Travels in New England" informs us that in the year 1800 the Boston schools were visited and regulated by a committee of 21 gentlemen, annually chosen, and invested with ample powers for the purpose of their commission. It was the duty of these gentlemen—

to visit these schools once in three months; to examine the scholars in the various branches in which they are taught; to devise the best methods for the instruction and government of the schools; to give such advice to the masters as they shall judge expedient; and by all proper means to excite in the children a laudable ambition to excel in virtuous, amiable deportment, and in every branch of useful knowledge.

Such were the duties of the board of education of that day. It is a far cry from this early procedure to present-day theory and even present-day practice.

A good statement of present-day theory of the functions of a school board was given in July at the meeting of the department of school administration of the National Education Association in New York City. A member of the Newark (N. J.) Board of Education stated the function of a board thus:

Members of a board of education are directors of a large corporation and should apply the principles of good corporation management to educational affairs. Their executive officers should have authority and be held accountable for results.

A board should supply funds, supervise expenditures, and determine the general policy and the extension of the system.

Its duty is to see that the schools are properly managed, and not to manage them itself.

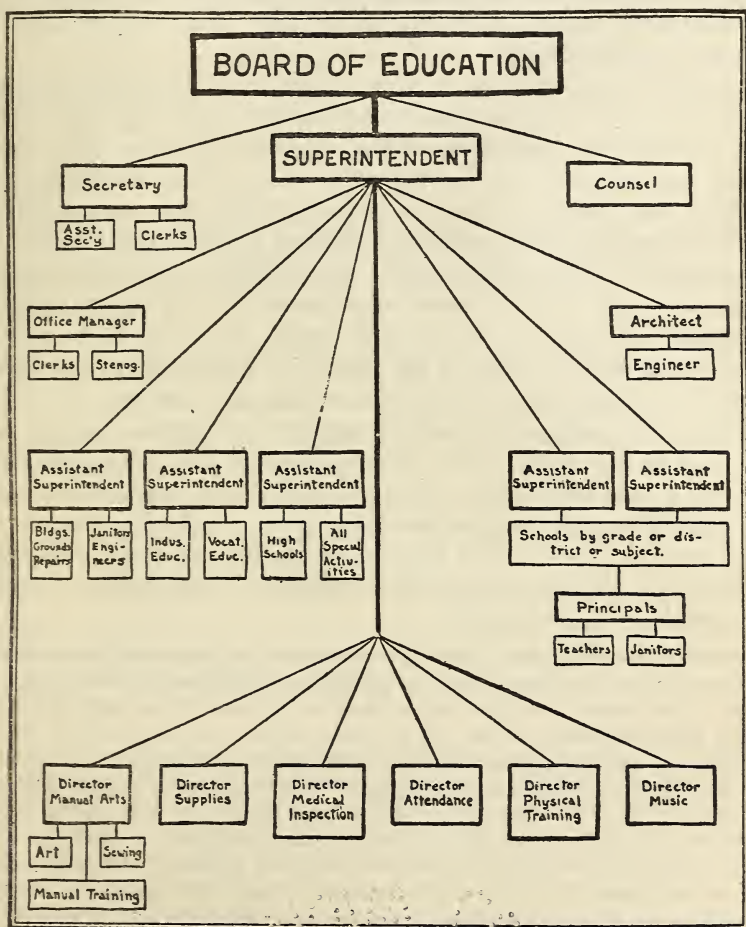
It is not appointed to build buildings, but to see that they are built.

It is not appointed to supervise teachers, but to see that they are supervised.

In short, it is appointed, not to do the work itself, but to get it done.

As running a school system is an expert business, directed to one end, the education of children, it should be managed in all its aspects by an expert manager, and that manager should be an educator.

The following diagram represents these relationships:



Organization of a city school system.

Few cities have their schools administered strictly upon this plane, yet the tendency is definitely in that direction. The plan recently put in operation in Minneapolis, if diagrammed, would be seen to bear a close resemblance to the standard here shown.

When it is considered how frequently the personnel of city school boards changes, it is easy to understand why a steady policy need not be expected. In his report on the schools of Brockton, Mass., Supt. Farley calls attention to the fact that of the 9 members of the board whom he met as a candidate five years before, only 2 are still serving, and that within this short period 18 different members have served. This is by no means an unusual example.

Changes among superintendents, too, are frequent. Under such unstable conditions, both in board membership and in supervisory officers, it is not difficult to see why cities have their "ups and downs" in school administration.

The abundant literature on the subject of school administration available for the information of board members, through the department of school administration of the National Education Association and the numerous school surveys of recent years, is doing much to enlighten new board members as to their duties and responsibilities. Standards are gradually getting established in the public mind which soon suggest to the board member who displays a tendency toward taking over that direct personal management of professional details, appropriate enough in President Dwight's day, that he is not expected to assume the rôle of an expert in dealing with the highly intricate problems presented by the schools of a modern city. The fact that practically all the school surveys have found cause to deal with this phase of the school situation shows that American cities have yet a long way to go before they get the management of their schools fixed securely and permanently upon a professional basis.

For example, the study of the administration and costs of the Boston schools made this year under the auspices of the finance commission contains this paragraph:

The school committee may properly be considered as exercising the responsibility of a board of directors responsible to their constituency, the citizens of Boston. They must pass upon all matters which have to do with the maintenance and development of the public school system. As laymen they can not to advantage, and should not therefore, attempt to administer the school system. Efficiency in administration demands that they choose a superintendent of schools as their chief executive officer, who should, by rule of the school committee, and the exercise of his own judgment, delegate to other executive officers those duties which could best be performed by them. All other executives should report to the board of education through him, except in cases of an appeal from the decision of the superintendent, when the subordinate executive, or any other employee, should carry his case before the school committee. Under this arrangement, all questions of policy for the schools not determined

by rule or regulation of the school committee, and not of sufficient significance to be brought before them for decision, should be decided by the superintendent and reported to the committee.

THE SELECTION OF TEXTBOOKS.

In no department of school work is expert judgment more important than in the selection of textbooks, yet in this field cities here and there are often hindered from securing the best books that the market affords by the failure of boards of education to recognize their own lack of the qualifications for the task of selection. The State superintendents of the five New England States have sent a joint communication to the leading publishing houses protesting against the unprofessional activity which the agents of a few of them indulge in to get school boards to adopt and purchase books and apparatus which the superintendent does not need or which he considers not the best for carrying out his plans. The topics covered by the memorandum include intimidation of superintendents, principals, and teachers, corruption and interference with properly constituted local school officers.

The memorandum assumes that in most cases the responsible heads of the various houses are unaware of these practices, and that the objectionable practices are limited to the representatives of comparatively few houses.

A city which is the home of a single publishing house is likely in purchasing textbooks for its schools to encounter the plea that it is the duty of the school board to encourage home industry by exclusive use of the books of the local concern. In December last in the public press of Cincinnati, Ohio, such a situation was portrayed. The end of a five-year period was approaching and a new adoption was to be made. It was a question whether the books of the local concern should, as heretofore, be adopted, largely to the exclusion from consideration of books published by houses located elsewhere, or whether the best books should be selected without regard to the claims of "home industry." Supt. Condon adopted the motto "children first," and announced the following policy for the adoption of textbooks for the city:

I believe this should be the established order for the adoption of all books: First, that the books to be used in any department or subject should have the careful consideration of the teachers directly concerned with such use; that this examination should be deliberately made, taking into account all desirable books which may be available; that the conclusions reached should be transmitted to the superintendent in the form of a written report, either as the unanimous or as a majority and minority report of the teachers who have considered the matter.

Second, That the superintendent should carefully consider these recommendations, transmitting the same to the board of education, and stating in writing whether he agrees or disagrees, and if the latter, why.

Third, That, as required by statute, the board should make the formal adoption. No book should be adopted, however, that has not been considered by both teachers and the superintendent; the board may not agree with the recommendation by the superintendent that has not had the consideration of the teachers.

In the selection of textbooks, as in the appointment of teachers, the question to be answered is the question of merit. I believe the method of selection which I have proposed is well calculated to determine the question. It recognizes the right of teachers to say what books they would like to have with which to do their work; it corrects the individual point of view by having a representative committee pass upon the subject; it gives the superintendent the right to review and the opportunity for approval or disapproval; it gives the board of education the right to review the recommendations of both teachers and the superintendent. The superintendent may not agree with the recommendations of the teachers; the board may disagree with the recommendations of both; but neither the superintendent nor the board should act until the subject has first been considered by the teachers.

The board having approved Supt. Condon's plan, committees of teachers were formed and several months were spent by these committees in examining all available texts. Teachers, principals, superintendents, and all were cordially disposed to recommend the books of the local company, whenever other things were equal as between these books and the books of other publishers. Written reports were sent to the superintendent, and late in June, on the basis of these reports, but on his own responsibility, the superintendent made his recommendations to the board. In spite of active and even bitter outside opposition, his report was adopted without modification. Thus a definite policy, based wholly on the interests of the children of the schools, backed by the superintendent with courage and without shifting of responsibility, won decisively in a situation about as difficult as can be imagined.

THE BAYONNE CASE.

Early last fall Dr. John W. Carr, superintendent of schools in Bayonne, N. J., made public information in his possession to the effect that certain members of the board of education of his city, a majority, including the president of the board, had entered into collusion to carry through certain measures involving an improper use of public funds. The board preferred charges against the superintendent and removed him. The superintendent appealed to the State commissioner of education, on the ground that he was dismissed without cause before the termination of his contract. The assistant commissioner of education, by whom Supt. Carr's appeal

was heard, conceded that no cause had been shown, but upheld the board's action on the ground that it was not necessary to show cause. A final appeal to the State board of education, and then to the supreme court of New Jersey, resulted in the restoration of the salary of which the superintendent had been deprived pending the final settlement of the case. Meanwhile, February 7, 1916, Supt. Carr had been elected to another position and had accepted. The report of the reviewing tribunal, which was the advisory committee of the State board of education, declared:¹

Was the discharge of Mr. Carr without cause? The reasons for his discharge are fully set forth in the record—in fact, a trial was held. The commissioner has found that there was no just reason for the discharge. We agree with such conclusion. We have read all the testimony, and its reading leads us irresistibly to the conclusions that the action of the board of education of the city of Bayonne was the result of prejudice and not of disinterested judgment.

We recommend, therefore, that it be adjudged that the removal of Mr. Carr as superintendent of schools was in violation of the terms of his contract and therefore unlawful, and that the decision of the commissioner of education, in so far as it declares such dismissal legal, be reversed.

SPECIAL BUREAUS AND DEPARTMENTS.

Several cities maintaining special bureaus are making notable contributions to educational progress by furnishing in their annual reports detailed descriptions of the investigations which have been conducted by their experts in charge. The conclusions reached through these investigations can not fail to have significance wherever the reports are studied. They seem likely to be far-reaching in their influence. Among the reports available, those of Boston, Detroit, Des Moines, Kansas City, New York City, and New Orleans are especially suggestive in this respect. Either because of the methods used in investigations or the conclusions reached, each of these reports is worthy of a place among the reference books accessible to superintendents and other supervising officers.

The Kansas City report for 1915 devotes pages 57 to 86, inclusive, to the work of the "Bureau of Research and Efficiency." The work of this bureau, as reported by its director, Mr. George Melcher, has been chiefly as follows:

First. Cooperating with the superintendent's office in collecting and analyzing the statistics of our school system and making such comparisons with other systems as might lead to a better understanding of our own educational status, and assist in the solution of our problems.

Second. Cooperating with the superintendent's office and the various committees on the revision of the course of study.

¹ As reported in the Bayonne Evening Review, Nov. 18, 1915.

Third. Assisting in the revision of the records and report blanks of the schools so as to make the reports and records reveal more fully educational progress and results.

Fourth. Handling for the superintendent's office many of the questionnaires that came from other school systems, asking for statistical and related information. These often require no little time to answer fully and accurately.

Fifth. Assisting in drafting and presenting to the legislature bills needed for the improvement of our schools. A report of this work is made at another place.

Sixth. Cooperating and advising with the teachers of the Teacher Training School. The director met the students of this school for lecture and conference one hour each week last year, in order that these students might enter our school system with a better grasp of the meaning and usefulness of educational standards.

Seventh. During the past year objective scales have been used in measuring the results in arithmetic, handwriting, spelling, and language work. The facts discovered by these measurements have been organized for the use of the superintendents, principals, supervisors, and teachers, as a basis for securing better results.

Eighth. Studying, only very superficially this year, the cost of maintaining the schools. This investigation has been carried far enough to make it evident that cost standards for the various items of expense are needed. Cost standards are needed for heating, for lighting, for janitor service, for water, for supplies, etc., and for teaching, supervision, and administration.

Ninth. Some superficial studies have also been made of the causes of non-promotion, overageness, and school mortality.

Tenth. Under the direction of the bureau, a study of the grading of high-school pupils was made by Mr. J. W. Richardson, a graduate student of the University of Iowa.

The Detroit report for 1915 devotes pages 96 to 113, inclusive, to the report of the "Supervisor of Educational Research" under four heads: (1) Research; (2) standardization; (3) statistics; (4) library. Testing was done in arithmetic, handwriting, spelling, English composition, reading, and algebra. The procedure in each subject is set forth under the caption "Work done." This is followed by a statement of "results," and this by "recommendations."

In closing his report the director, S. A. Courtis, urges the need in the school system for experimental schools or classes where new methods can be given trial in the hands of teachers of unusual ability and under conditions that would permit of measurement under favorable conditions.

In Des Moines the work of measurement and investigation is reported by Asst. Supt. J. W. Studebaker under three sections:

Section I. The pupil's achievements. (a) Spelling. (b) Arithmetic. (c) Penmanship.

Section II. Distribution of time among the various elementary school subjects.

Section III. The children and their progress.

The theory underlying Mr. Studebaker's work is contained in the following paragraphs:

Underlying all of the investigations is the one sound principle that processes or methods are good only proportionately as they produce desired results. This being true, it is possible to measure the value of a process only by determining the quality and quantity of its products. We must, therefore, at intervals, apply scientific tests of *results* in order to reveal the value of methods. Such a procedure will discover to us certain unsatisfactory elements; will cause us to revise our methods and try once more to increase the value of the products.

Good teaching and efficient school administration, then, imply the use of the best-known methods, always followed by a properly applied test of their value to the end that weaknesses be rejected and effective methods retained. It is only in this way that we can ever hope to emerge from a position of blind attack upon serious problems and place our profession on a level with the sciences where work is done in the lights of *facts*, not personal opinion and traditional pedanticism.

The Boston report for 1915 devotes pages 84 to 118, inclusive, Appendix A, to a summary of the work of the "Department of Educational Investigation and Measurement," Frank W. Ballou, director. In addition to the summary, pamphlets have been issued from time to time during the year in limited quantity, giving in full detail the methods and results of the various studies undertaken. Samples of these pamphlets are bound with the summary as follows: Spelling, 50 pages; geography, 40 pages; first-grade syllabus, 44 pages; second-grade syllabus, 93 pages; third-grade syllabus, 125 pages. The work of the department has embraced:

I. Supervision of the revision of the elementary course of study: (a) Teacher participation in the revision. (b) Purpose of the teacher conferences. (c) Work of committees on standards. (d) Participation of others.

Each resulting grade syllabus is divided into two parts. Part I consists of a statement of aims, minimum requirements, and objective standards in each subject. Part II of the syllabus is suggestive and not required. It consists of suggestions on subject matter, methods, and minimum requirements.

II. A plan for the promotion of teachers on merit.

III. Measurement of educational results.

IV. How the department carries on its work.

V. Improvements in methods of carrying on work.

VI. Educational problems which should be studied from data in the office of the department.

The New Orleans report for 1914-15 devotes pages 49 to 255, inclusive, to the report of the "Division of Educational Research," David S. Hill, director.

Part I. Comparative measurements of the progress in school of 36,000 children in New Orleans.

Part II. A practical study of elimination of pupils from the New Orleans public schools.

Part III. The ideals of children and the occupational preferences of 7,000 pupils 13 years of age and older in New Orleans.

Part IV. Further studies of individual variation.

Part V. The Delgado survey of industries and mechanical occupations of boys and men.

Tables and figures dealing with enrollment, elimination, causes of withdrawal, status of parents as to wages, occupation, etc.

The semiannual report of the "Division of Reference and Research," of New York City, Albert Shiels, director, is a pamphlet of 166 pages, devoted to a description of special studies undertaken in New York in kindergarten, elementary and secondary departments, summaries of reports and legal decisions; and compilations and references to reports from various cities covering quite a range of topics indicating educational progress. These compilations include topics relating to all grades of schools below the college, to vocational instruction and guidance. They describe surveys and tests and discuss school textbooks. The report closes with a list of publications of interest to teachers.

In New York "The Statistical Division" deals with a portion of the business which in smaller cities is included in the departments enumerated above. In this division the first principle is to obtain all material once and once only; the second principle is to obtain all information as nearly at first hand as possible; and the third, to do as much of the work at the central office as possible. The remarkable usefulness of the Hollerith tabulating outfit in handling school figures is set forth at length.

The policy of doing as much of the work at the central office as possible is said to have had the following effect in the elementary schools:

1. It has done away with promotion reports.
2. It has reduced the annual report to five simple questions.
3. It has done away with a school report on ages of pupils.
4. It has reduced the number of operations required of teachers in reporting the register and attendance of pupils.
5. It has reduced the number of processes whereby the same facts are handled in the principals' offices.

Rochester, N. Y., maintains an active bureau of reference under the direction of Asst. Supt. O'Hern, but no report of its work for 1915 is at hand. Baltimore discontinued its bureau after one year's service, but has recently reinstated it with its former director, Mr. Edwin Hebden, in charge.

TEACHERS AND UNIONS.

The proposal to "unionize" the teachers has in the past year assumed such proportions that it bids fair to become an important problem of American education. The proposal dates back to the

efforts of the American Federation of Labor to organize teachers in the year 1902, but nation-wide attention has been drawn to it only through the experiences of Chicago and Cleveland in the last few years.

Chicago has been the main battle ground of the struggle for the organization of a teachers' labor union, and is at the writing of this report plunged into a state of chaotic excitement. Rulings of the board of education, investigations by the common council, court decrees, and injunctions have followed one another in rapid succession.

The attitude of the board of education in Chicago to the teachers' unions was brought to the attention of the National Education Association in New York City in 1916 by the president of the board, Mr. J. Loeb. Mr. Loeb contends that teaching is not a trade, but a profession; that teacher unions make for divided allegiance, breed suspicion and discontent, destroy harmony, and create strife, and hence are a menace to American education. In response to Mr. Loeb, Mrs. Ella Flagg Young, formerly of Chicago, showed her approval of the movement in that city. She confessed that perhaps she was not in favor of it in principle, but she said that—

the teachers found that in order to get anything done they had to have voting power behind them. They found that the men in their own station in life would not help them, and they had to go in with those who had felt the oppression, the grinding power of riches.

At a mass meeting called by the American Federation of Teachers, July 6, 1916, in New York, the following resolutions were adopted:

It is the sense of this meeting—

That the social and technical efficiency of the public schools depends upon the establishment of high personal and professional standards for the teaching staff;

That persons of independence can be obtained for the teaching and supervising staff only with the establishment of secure tenure based on quality of service;

That adequate professional standards can be maintained only through the control of personnel by educational officers engaged in continuous and professional service;

That the attempt to control the personnel of teaching and supervising staff by changing lay boards is a serious menace to the efficiency of the public schools, as well as an affront to American ideals of independence and fair dealing;

That we protest against the appointment or dismissal of teachers and supervisors by lay boards, as tending to place the professional staff at the mercy of sinister and unscrupulous interests.

That we call upon public-spirited citizens and school patrons to resist the encroachments of partisan, sectarian, or commercial interests in the control of the public schools;

That we condemn the efforts of special interests to wrest from the educational authorities the control of the public schools;

That we protest most emphatically against the arbitrary and discriminatory dismissal of efficient and superior teachers by the board of education of Chicago, by methods and for motives contrary to sound public policy;

That we send to the Chicago Teachers' Federation fraternal greetings and expression of good will, with the sincere wish that the stand taken by that organization for professional interests will meet with abundant success;

That these resolutions be published and that copies thereof be sent to the chief educational authorities of the several States and to the United States Commissioner of Education.

The experience in Cleveland is also illuminating. It shows again that whatever be the merits in the contending viewpoints, the clash of these viewpoints is not without its serious effects on the working efficiency of the school system involved in the controversy.

Following is a brief summary of the Cleveland experience: In the early part of the year 1914 some members of the teaching force began an agitation looking to the formation of a teachers' union, to be affiliated with the American Federation of Labor. The board of education expressed its disapproval of that effort. Nevertheless the Grade Teachers' Club authorized its executive officers to take steps for the formation of a union. Thereupon the board of education, on the 18th of May, 1914, resolved:

(1) That this board reiterates and reaffirms its judgment and opinion that an organization of teachers within the system in affiliation with an organization outside of the system is detrimental to the public welfare and harmful to the best interests of the public-school system.

(2) That it is the rule of this board, and to be and become a part of the contract of employment with any teacher hereafter appointed or reappointed, that membership in an organization as is above described shall be regarded as a breach of the contract of employment and the equivalent of a resignation of such employment, and the acceptance hereafter of an appointment as a teacher will be regarded as an acceptance of this rule.

No union was then formed, but shortly afterwards an action was instituted in the court of common pleas of Cuyahoga County to have this resolution declared null and void and to enjoin the enforcement thereof. What followed is described in the report of the city superintendent of Cleveland for the year 1914-15:

On June 9, 1914, a decree was made by W. B. Neff, one of the judges of said court, declaring this resolution to be in excess of the power of the board of education, and enjoining the board of education, superintendent of schools, and other officers of the school system from enforcing the same, and also enjoining the superintendent from failing or refusing to appoint or reappoint any teacher because of her membership in a union or her efforts to form such a union.

This injunction, notwithstanding its obvious invalidity, was faithfully observed by the superintendent and his assistants and all others having to do with the appointment or reappointment of teachers. A number of teachers, however, were guilty of such misconduct and insubordination as, in the opinion of the superintendent, made their further continuance in the service injurious

to the best interests of the schools. They were not reappointed for that reason, and for none other.

Some of these persons, in cooperation with outside interests, deeming themselves aggrieved, and asserting without warrant in fact that their failure of reappointment was due to their previous efforts to form a union, made application to W. B. Neff, the judge of the court of common pleas who had issued the injunction, for a citation against the superintendent for contempt. It was charged that he willfully and intentionally refused to obey the injunction order, and that he had failed and refused to reappoint the applicants because of their union activities. A long trial was had, and on October 30, 1914, this judge found the superintendent guilty of said contempt, and urged the superintendent to reappoint these teachers in order that the superintendent might thereby escape punishment. The superintendent refused, for the reason that such power of appointment was vested exclusively in him and not in the courts, and that to comply with this demand would destroy discipline and order in the school system. A sentence of 10 days in jail and a fine of \$500 and costs was imposed upon the superintendent.

Execution of this judgment was immediately suspended by the court of appeals, which later reviewed the case and reversed the sentence. The court of appeals, in its opinion, vindicated the power and authority, both of the board of education and of the superintendent in all respects. It held that the original resolution forbidding the organization of a union and membership therein was within the power of the board of education; that the order of injunction was in excess of the power of the court, and was null and void, that W. B. Neff was biased and prejudiced, and should not have proceeded to hear the contempt proceedings; and that as a matter of fact there was no evidence to support a finding that the superintendent had disobeyed the injunction order, or was guilty of contempt.

An application to the Supreme Court of Ohio to take jurisdiction of this contempt proceedings was denied.

Thus ended an episode having many unpleasant aspects. I am of the opinion, however, that much good has resulted from it. The agitation originally for the organization of a union was confined to a very small group of teachers. These did not at any time represent the teaching force in whose behalf they assumed to act. At all times the spirit and loyalty to duty of the teaching force has in the main been above reproach. As a result of the proceedings above related, the disturbing elements have been removed or disciplined, and the professional spirit and loyalty to duty of the teaching force are of the highest order.

However, the whole problem is far from being closed in Cleveland, for later reports show that teachers have secured a ruling of the higher court which grants them the right to organize and affiliate with labor.

CHAPTER IV.

EDUCATION IN THE SMALLER CITIES.

By W. S. DEFFENBAUGH,

Chief of Division of School Administration, Bureau of Education.

A chapter treating of progress in education for a period of only one year, and even for a longer period, must deal principally with the change in the machinery of education. It is not the purpose of this chapter to show how much better children in the smaller cities are being educated now than a year ago. The aim is to summarize changes in administrative machinery from about 700 letters received from superintendents in the smaller cities, stating the significant steps taken in their respective cities looking toward the improvement of schools. It will be impossible, on account of the brief space allotted, to quote from many of the letters received. Where quotations or descriptions of changes are given they may be considered as typical or as out of the ordinary.

Practically every superintendent reporting has taken some step or steps looking toward the improvement of his schools. Some cities are adopting the newer and less tried plans, while others are only beginning to adopt some of the methods and plans that have long since been in use in the most progressive schools. For example, some of the smaller cities, especially those of less than 5,000 population, have for the first time introduced shopwork for boys and home economics for girls; some are for the first time offering elective subjects and elective courses in the high school.

One reason why some cities have been slow to adopt modern ideas and methods is the conservatism of the people and of school board members. In one city the superintendent made a vigorous effort to introduce home economics, agriculture, and commercial subjects, but the board of education replied: "Go on in the same way that we have been; that is good enough for us." Lack of progress, however, is not always due to conservatism on the part of the people, but to a failure of the superintendent and teachers to keep the people informed on current educational thought and practice.

Another reason is that the finances of many of the smaller cities are not adequate to maintain a modern system of schools. Some of these cities are struggling along with a high tax rate and expending a large amount in proportion to their wealth, yet the schools are inferior. It would, no doubt, be of advantage to the schools of some of these cities if they were included in a large taxing unit, as the township or county.

BUILDINGS AND GROUNDS.

The item of progress most often mentioned in the special reports sent this bureau is the erection of new buildings, especially new high-school buildings, and the purchase of playgrounds.

The housing of school children has become a problem in the small as well as in the large city, due sometimes to a rapidly increasing population, but often to the rapid increase in high-school enrollment and the increased holding power of the elementary grades. It is not unusual, as is shown in Chapter III, volume 1, of the 1915 Report of the Commissioner of Education, for high-school enrollment to increase three times as rapidly as grade enrollment. This rapid increase has made it imperative that new high-school buildings be erected.

The high-school buildings that are now under construction are usually of the most modern type. No expense is spared to make them answer the purpose of a modern school. It is not unusual for a city with a population of from 10,000 to 30,000 to erect a high-school building at a cost of \$150,000 or \$200,000. Some cities of this size are erecting buildings at even greater cost. Hammond, Ind., for instance, is erecting an industrial high school at a cost of \$300,000. Among other cities that are erecting high-school buildings at a cost in excess of \$200,000 are Parkersburg, W. Va., and Lebanon and Butler, Pa.

At Redondo Beach, Cal., a high-school building costing \$150,000 has been erected on the group plan, consisting of four buildings. There is an auditorium equipped with a moving-picture booth and a large pipe organ. This auditorium is used as a civic center. It is planned to have pipe-organ recitals on Sunday afternoons free to the public.

At Ludlow, Ky., a four-room modern cottage for the janitor has been erected on the school grounds.

At Hiawatha, Kans., the school board has secured the property and grounds of an academy, consisting of a 10-room school building, 20-room dormitory, a modern 8-room dwelling, and 10 acres of land. A new high-school building is being erected on these grounds. The dwelling will be used as a residence of the superintendent of schools.

The school board at Port Arthur, Tex., is solving the building problem for a rapidly growing city by introducing the Gary plan of accommodating two schools in the same building.

In September, 1914, Port Arthur had three elementary schools, a high school, and several outlying schools. The elementary schools were pure study schools, with accommodations for classroom work only. These buildings, with one exception, were congested, even using insanitary basement rooms. With the school enrollment increasing about 25 per cent a year, it was found that annexes to the old buildings or a new building every year would be imperative. This solution of the building problem made possible only a school seat for every child. This plan did not provide special facilities, as laboratories, playgrounds, etc., which every progressive school system should have as part of the school plant.

Since the congested condition of the Port Arthur schools called for immediate relief, a temporary rearrangement was brought about as follows: A complete reorganization of the elementary schools into work-study-and-play schools, making use of the available grounds all day for playground purposes, appropriating all basement and waste space possible for special work, adding portable buildings for special work where occasion demanded it, making a reassignment of teachers for special and regular subjects, employing playground teachers and one general supervisor of instruction. Before the plan was adopted the building cost, with only classroom facilities, was over \$100 per pupil. The rearrangement reduced the cost to approximately \$70 per pupil, and relieved building congestion until permanent plans could be made. Miss Marie Anderson, supervisor of instruction in the Port Arthur schools, summarizes the reorganization of the schools of the city as follows:

The school authorities have changed their whole school building policy from the traditional elementary classroom type to modern centralized plants with vocational, playground, library, and special facilities in addition to study facilities; and from the traditional grade-school organization to the work-study-and-play plan without increasing the cost of education to the taxpayers.

A few years ago, when school boards were planning the erection of new buildings, little thought was given to the necessity of large playgrounds. Now progressive communities are demanding that ample playgrounds around the school buildings be provided. Recently the people of Webster Groves, Mo., voted 7 to 1 to issue bonds to purchase an athletic field of 10 acres adjoining the present high-school grounds. The school board at Parkersburg, W. Va., has recently purchased a site containing 28 acres on which will be erected a high-school building. Part of the grounds will be used

as an athletic field, part for a campus, and about 6 acres for the use of the department of agriculture in the high school. In making plans for the use of the grounds, provision is made for future buildings.

The school board of Kenosha, Wis., has purchased 35 acres near the city to serve as a site for a new high school at some future time. Ten acres of this are platted for school gardens.

School boards in other cities, before purchasing at an exorbitant price a tract of land just large enough for a school building, are learning to think twice when a large tract of land at a less price may be had at no very great distance from the business and residential sections of the city.

Though large buildings have been erected, it is doubtful whether many cities have erected buildings large enough to accommodate the high school for more than a few years or have had vision enough to see conditions 10 or 15 years hence.

With all the building activity it has been necessary for most cities erecting new buildings to issue bonds. Fear has been expressed in some places that there is too much of a tendency to draw on the future, that a city should not burden the next generation with a large bonded indebtedness. As a rule, a city should not require the next generation to pay for what the present generation uses. If, for instance, bonds are issued for paving a street, the paving is worn out before the bonds are due, and those who received little or no benefit from the paved street will have to pay for it. The same principle does not apply in issuing bonds for school purposes. The persons who pay the bonds are the ones who received the benefit of them. A 20-year bond of \$10,000 is issued, for example, to purchase and equip a playground, the children who 20 years hence pay the bonds are the ones who used the playground. The city simply borrows on the child's future to pay for his present needs.

COURSE OF STUDY AND ORGANIZATION.

During the year many superintendents have been giving careful consideration to the course of study. They have realized that the course of study with eight years in the elementary schools and four years in the high school has grown up largely by accident and not by any planning on the part of the educators; that the United States is practically the only country having such an arrangement; and that an American child has lost two years by the time he is 18 years of age as compared with a child in France or Germany.

In order to economize time, school superintendents have set themselves the task of reorganizing the schools with six years in the elementary grades and six years in the high school. Already many of the smaller cities have abandoned the eight-four plan and have

adopted the six-six plan. In an investigation made by Mr. C. C. Bingaman, superintendent of schools at Goldfield, Iowa, 209 of the smaller cities claim to have junior high schools. If the definition, "a junior high school is an organization of grades 7 and 8, or 7, 8, and 9, whether housed with the senior high school or separately, to provide means for individual differences, especially by an earlier introduction of prevocational work or of subjects usually taught in the high school," were applied, the number, no doubt, would be considerably diminished. Some superintendents who have introduced departmental teaching in the grammar grades mistakenly designate the grammar schools as junior high schools.

The question is frequently asked by opponents to the junior high school with the differentiated courses whether such an arrangement will not produce a caste system in America. The reply is that it will not so much as the present system of the eight-year course. It is well known that pupils who drop out of school at the end of the eighth grade must to a very great extent take their places with the unskilled. A junior high school in which prevocational courses are offered and emphasized would tend to raise the standard of those leaving school at the end of the eighth or ninth grades. A six-year differentiated high-school course, it is claimed, is more democratic than an eight-year elementary course and a four-year high-school course, because a pupil is given more opportunity to study those subjects best suited to his ability and needs. It is not democratic to require everyone to do the same thing; neither is it democratic to require children after they have "the tools" to study the same subjects. It is claimed that a child at the beginning of the seventh grade should not be permitted to elect courses and subjects. Which, the supporter of the junior high school asks, is nearer the correct method—a cast-iron course in which every child must be fettered, or a course that permits a pupil to choose subjects or courses under the guidance and counsel of those who know his ability and who have carefully studied his needs? Fewer mistakes are, no doubt, made under a carefully supervised elective system than under a rigid iron-bound system. Throwing the same course of study at children is like shooting at a mark in the dark. The mark may be hit, but only by accident. A wise physician does not administer the same medicine to two persons who have the same disease without first studying the nature of each patient. The school world is just beginning to attempt through the junior high school to put into practice the theory that no two children are alike, and that they should not be compelled to study the same subjects except so far as need be to get the tools necessary to take up subjects that have content and that are of practical value. The three R's are not the fundamental subjects, as commonly stated; they are but the tools with which to get at the fundamental subjects;

learning to write, to cipher, to spell of themselves never gave a child an idea worth while and never will. Only as one uses the tools does one become educated.

The opponents of the six-year elementary course say that a child can not get the "tools" in less than eight years, and scarcely in that time. If getting the "tools" means such a mastery of them that no mistakes will ever be made in spelling and ciphering, and that a handwriting will be copper plate, it is not easy to say where the limit should be placed for learning the three R's; but to continue drill upon reading, writing, and arithmetic for eight years is considered by the supporters of the six-year elementary course to be a waste of time. The pupil repeats in the seventh and eighth grades the same work he had in the fifth and sixth, in the same drill fashion. For the same reason pupils in the seventh and eighth grades often tire of the work of these two grades. They are longing for something new, something with a meaning. About 10 years ago a superintendent took charge of a system of schools that had nine grades in the elementary schools, the ninth being given up to a "thorough review of all the common-school branches." Very few pupils remained through the nine grades and entered high school. There was an enrollment of only 100 in the high school in a city of 10,000 population. The few who entered high school were weak and dependent. They did not have the "tools" and did not know how to use what they did have, largely because the mechanics of the three R's had been insisted upon rather than their use. The superintendent, after making an investigation, decided to reduce the number of grades to eight, and to promote the eighth grade to high school along with the ninth. To the wonder and surprise of teachers and parents the eighth-grade pupils that had not made a "thorough review of the common school subjects" did much better work in the high school than the ninth-grade pupils promoted at the same time. In those cities where there are only seven grades in the elementary schools the seventh grade, when promoted to high school, to all appearances takes up high-school work just as easily as eighth-grade pupils in other cities.

Whether or not a six-year elementary course and a six-year high-school course proves to be a better arrangement than an eight-year elementary course and a four-year high-school course, the movement to reorganize on a six-six plan is in full swing, and the momentum is so great that it can not be stopped by the arguments of conservatives.

Educational meetings are beginning to place emphasis on the adjustment of the elementary course of study to the reorganization of the seventh and eighth grades. It is clear that there should be

reorganization along the entire line from the kindergarten through the junior high school. Simply to make a separate administrative unit of the seventh, eighth, and ninth grades means little. The aim of the first six grades must be more definitely fixed, and readjustments made so that the pupil's time will be economized and the school arts well enough mastered to attach the high-school subjects offered in the seventh grade.

The results of the reorganized school are uniformly pronounced successful. In reply to a questionnaire submitted by Mr. Bingaman, of Goldfield, Iowa, 91 superintendents say that students are held longer in school because of the advantage of the junior high school, 4 replied in the negative, and 7 said that it was too early to express an opinion.

The question is sometimes asked whether a junior high school in a small city is practicable. Of 96 superintendents, 90 say it is. They give the following as their reasons for advocating junior high schools: "Better and more enriched courses of study"; "keep pupils in school longer"; "greater interest shown both by pupils and teachers"; "better opportunities for vocational guidance"; "course can be better adapted to pupils"; "lifts seventh and eighth grades to a higher level of endeavor"; "promotion by subjects"; "no other plan welds grade and high school together like this"; "provides for individual differences."

GRADING.

Experiments in different schemes of grading are reported from several cities. At Beverly, Mass., a new system of grading was introduced in September, 1915. It is designed to aid in so adapting the work of the schools to the needs of the children that each pupil may have an opportunity to do the best work of which he is capable.

The course of study is being revised so that the work to be accomplished in each fourth of a school year is carefully outlined. In those schools where conditions warrant it the pupils of a grade will be grouped in three divisions in essential school subjects, as reading, arithmetic, language. Between September and June one of the divisions will do three-quarters of the work outlined in the course of study, another will do four-quarters—a normal amount—and the other division will do five-quarters of the work and will thereby gain one-fourth of a year's work every 10 months. Pupils may be in one division one year and in another division the next, these groups being formed at the close of each year in June, and each pupil being placed where he can do the best work. The superintendent of the Beverly schools claims that when the system is in full working order, at the end of about three years, there should be

necessity for very few nonpromotions. Nearly every pupil will be able to continue his work without repetition, but some pupils will take a longer time to cover the work of the course than will others, and the plan will enable some pupils to save time without omitting any part of the elementary course, while it gives others a better opportunity to acquire the essentials than is possible under the ordinary grading plan.

VACATION SCHOOLS.

From indications it will be only a few years until every small city will have a vacation school for children who have failed in one or two subjects and for those who have the ability and strength to gain a half grade. At Warren, Pa., all children who fail to make 75 per cent in any of their subjects from the second to the eighth grade, inclusive, and all children who make an average standing of 90 per cent or above from the fourth to the seventh, inclusive, may enter the school. Last year 95 per cent of those who had failed in some of the subjects and 100 per cent of the strong pupils who attempted to make up a half year passed. Many other examples of like nature could be given.

Other schools, as East Chicago, Ill., and Independence, Iowa, have manual training in the summer schools. In Independence, Iowa, the summer course in manual training continues for eight weeks.

The vacation school of from four to eight weeks has made a place for itself and is no doubt a step toward the all-year school.

As yet Ardmore, Okla., and Eveleth, Minn., are the only small cities to report all-year schools.¹ The superintendent of schools at Ardmore reports that the plan is in successful operation and that the people are highly pleased with this form of organization.

The all-year school at Eveleth, Minn., has grown out of a summer school that has been successfully conducted for the past six years. A year ago, when special efforts were made to increase the enrollment of the summer school to over 600, it was decided to go over definitely to an all-year organization. Contracts with teachers were modified, reducing the regular school year from 10 months to 9 months, the following paragraph being inserted in the contract:

It is understood that the school year shall consist of four terms, spring, summer, fall, and winter. Each term shall consist of three school months of four weeks each. One-third of the work of the year [of nine months] may be done in any one term. Children are required to attend at least three terms of the calendar year.

The summer term this year opened with nearly 1,000 pupils and 45 teachers, the school day remaining the same, from 8 to 12 o'clock

¹ Results of an inquiry late in 1916, now being tabulated, will doubtless make additions to the list.

a. m., and from 1 to 3 o'clock p. m. The work is the same as in other terms except that more recreation is provided. The superintendent of schools at Eveleth pronounces the plan a success.

A movement for an all-year school at Newport News, Va., was started and was received with approval by a number of persons. The superintendent reports that when satisfactory details can be worked out the schools of Newport News will be run for 11 months in the year.

At Winston-Salem, N. C., the manual-training shops are kept open 10 hours a day every day in the week, except Sunday, and every week in the year. Anyone is permitted to go into the shops at any time and work on any project he may be interested in and take away the completed article at cost of material.

If all-year schools could be organized, they would be much better than the summer vacation school, since the summer session would then be an organic part of the school system. The vacation school has as its aim the making up of a half year's work or gaining an extra promotion in six weeks. Only very bright children can make an extra grade in six weeks, and only pupils who have failed in a subject or two can make up a half year's work. With an all-year school organized so as to promote children every 12 weeks, the child who has failed need repeat only one-fourth of a year and he would repeat it under normal and not under forced conditions, as is often the case in a six weeks' course. The bright child would also work under normal conditions and not cram a half year's work into a six weeks' course.

ADVANCEMENT OF TEACHER WITH THE CLASS.

Several superintendents report that they are making trial of the plan of advancing the teacher with the class through a few grades. In only a few cases has the plan been in operation long enough for the superintendents to draw any conclusions as to its value. In a recent report the superintendent of schools at Asheville, N. C., presents some testimonials of teachers in that city who have advanced with their classes through several successive grades. Miss A., who has taught the same pupils through 4A, 4B, 5A, and 5B, says:

I have noted several benefits from this method: (1) I have obtained a continuous view of the work in the above-mentioned grades, which has proved very beneficial to me; (2) I have had opportunity to learn every child perfectly and have been able to develop several weak children remarkably; (3) my children have grown accustomed to my methods, so that there is little waste of time over misunderstanding or discipline. I have found this a most satisfactory way of teaching. It brings results.

Miss B. declares:

I consider the results obtained very beneficial both to myself and children. I was familiar with the work already done by the children and was better able

to go on with the new. I knew all my children, their weak points and their strong points. Taking them on through the grades, I had time to work up weak ones, who would otherwise have been left behind, and to take strong ones on in their work, passing them through the grades faster than otherwise. The children also became familiar with the teacher. They understand her directions and are more interested. My work has been a great deal more interesting in going up with my class than ever before, and I hope next term it will be possible for me to continue with my class.

Fourteen other teachers in the Asheville schools present similar testimony as to the value of advancing the teacher with her class.¹

SPECIAL CLASSES.

There has within the year been a decided movement in the smaller cities to provide classes for exceptional children, especially for those over age for the grade. Several cities have adopted the plan of giving these children half-time manual training and half-time academic work. At Virginia, Minn., for example, a class was formed of boys from the fifth to the eighth grades, inclusive, who were retarded two or more years, and given half time in the manual-training shops. The results were: (1) Reduction of the number of cases of truancy; (2) greater interest in academic work; (3) relief to the regular grade teachers from the care of backward boys, so that the entire room made more progress; (4) better satisfied parents. The superintendent of schools at Virginia reports that the plan has been such a success that a similar class will be formed this coming year for girls, who will spend one-half their time in cooking and sewing. The stigma usually attached to such classes has been removed by calling them "opportunity classes." Many schools have made the mistake of calling these classes "defective classes." Parents naturally object to having their children placed in a special class for backward children. The term "opportunity class" is more euphemistic and is in reality the proper term. Among other of the smaller cities having such classes are Elyria, Ohio; Homestead, Pa.; Beverly, Mass.; and Kenosha, Wis.

SURVEYS AND SCHOOL REPORTS.

Though the survey movement has been largely confined to the schools of the larger cities, some of the schools in the smaller cities have braved the probe of a survey commission comprised of men and women not connected with the school system. All the surveys of the smaller cities that have thus far been reported have been constructive and helpful. A school board and school superintendent doing their duty and making progress as rapidly as means will admit need have no fear of a survey made by a committee composed of men and

¹ For a fuller account of this subject, see U. S. Bu. of Educ. Bul., 1915, No. 42.

women who have had experience as superintendents or as teachers, and who have had training in investigation and in the weighing of facts.

Probably one reason why so few surveys have been made in the smaller cities is due to the fact that funds are not available to pay for the services of a committee of experts. But this fact need not prevent a superintendent in a small city from making a survey of his school system. Every superintendent should himself be directing a continuous survey of his school system, to discover its weakness and its strength, and to invent means to strengthen the weak points. Possibly superintendents in several cities could form a group, and by so cooperating render one another valuable assistance without much expense. If, for instance, 10 superintendents should agree to cooperate to make a study of classroom achievements, unit costs, etc., norms could be established for these 10 cities. It would be an excellent plan for a group of superintendents to make a survey of their schools with the advice and cooperation of the school of education of the State university or of some other university maintaining a school of education. The facts collected would make excellent material for students in the school of education studying statistical methods to tabulate. The University of Kansas is setting an excellent example for other State universities by surveying the schools of 35 cities in that State. When the survey is completed it will be possible for each superintendent to see how his school varies from the norm in unit costs, achievement of pupils, etc. The department of education at the University of Iowa rendered excellent service to the city schools, also to the rural schools, by making a survey of the handwriting of the children of the State.

State departments of public instruction could, no doubt, render valuable service to superintendents who are surveying their schools. Heretofore State departments of education have exercised but little oversight of city schools or made any inspection of them. It would without doubt be to the advantage of city schools if they were inspected by competent State officials, and if the data could be collected, analyzed, and reported upon to the city superintendents, especially to superintendents in the smaller cities.

Superintendents who are contemplating a self-survey are referred to the Thirteenth Year Book of the National Society for the Study of Education for an outline of a plan for organizing a school survey, and also to City School Circular, 1915-16, No. 2, United States Bureau of Education.

Judging from the annual reports of superintendents thus far received for the year 1915-16, not a few superintendents are beginning to study their problems more scientifically than before. Some of

these reports may be considered the equal of some of the reports submitted by survey commissions. When all superintendents begin to understand how to collect and use data there will no doubt be less need for surveys by outside parties. At least it will not be necessary for an outside survey committee to do more than help interpret the data the superintendent has collected.

In a previous chapter mention was made of the self-survey conducted at Solvay, N. Y. The latest report, 1915-16, shows that the superintendent of schools in that city is continuing the survey begun several years ago.

The report of the superintendent of schools at Curwensville, Pa., may be taken as an example of what is possible for a superintendent in a city of 3,000 population to do to present to the public evidence of what the schools are doing and of their needs. The superintendent, in his report, explains as follows why he made a survey of his schools:

Due to the severe criticisms thrust into the ears of school officials, both as to our own as well as schools generally, we were very much interested to learn the true conditions in Curwensville. We firmly believe in surveys, but in a small-city school system it is almost beyond the financial grasp to hire an expert. So we determined to conduct an investigation and deal with problems as best we could.

Among the points investigated and reported upon were age distribution of pupils, promotions, medical inspection, achievements of pupils as determined by standard tests, junior and senior high schools, and costs.

The report of the superintendent of schools at Globe, Ariz., for 1915-16 may be given as another example of a self-survey. Among the topics treated are character of student and adult population, age and grade distribution, causes of nonpromotion, experience and training of teaching staff, achievement of pupils as measured by standard tests, costs of instruction in each elementary and high school subject. Diagrams are freely used to express statistical comparisons with other cities in Arizona.

During the year the following surveys in the smaller cities made by an outside survey staff have been reported to this bureau:¹ Ashland, Oreg.; Leavenworth, Kans.; Webster Groves, Mo.; and Jamestown, N. Dak. Several county surveys have been made in which the city schools were included in the survey, as San Mateo County, Cal., and Nassau County, N. Y. All of the surveys, while disclosing weaknesses in the school systems, have uniformly been constructive in character and the recommendations have been made to fit local conditions, as shown by the following summary of the recommendation

¹ See also Chapter XXI, Educational Surveys.

made in the reports of the survey commissions at Ashland, Oreg., and in Leavenworth, Kans.:

Ashland, Oreg.—1. That an outside room be provided for the manual training classes, to be built largely by the work of the boys themselves, and that a larger room be provided for the sewing work in order that the girls may work at tables.

2. That efforts be made to secure by loan or gift a larger collection of good pictures, mural decorations, and pieces of sculpture.

3. That doors or screens be placed in front of the toilets in the grade schools.

4. That 68° be established as the standard temperature of the schoolrooms instead of 70°, and that the halls of the East School be warmed.

5. That vigorous physical exercises be required in each grade room for at least five minutes during each session, or a run in the open air for an equal length of time.

6. That the main effort of the Ashland School authorities be directed toward courses in the standard academic branches, with knowledge of fundamentals, formation of character, development of disciplined mind, and acquisition of general culture as the chief educational aims, but that physical and industrial education be considered sufficiently fundamental and important as to demand thoroughly substantial support.

7. That the aim of the manual-training work be made more vocational, and that home gardens and poultry-raising clubs be organized under school supervision.

8. That prospective rural school teachers take the high-school teachers' training course, but that prospective city elementary and high-school teachers be advised to take their professional training later in higher educational institutions.

9. That more attention be given to the fundamentals of punctuation and capitalization.

10. That classes in penmanship be reorganized on the basis of ability, and that a large share of the time now given to the best one-fourth of the pupils of the upper elementary grades be devoted to the poorest one-fourth.

11. That good writing be made a prerequisite for admission to bookkeeping courses.

12. That more emphasis be placed upon silent reading.

13. That a teacher or supervisor of physical education be employed.

14. That a greater length of tenure of position be maintained in the high-school teaching staff.

15. That departmentalization be extended to include music and drawing above the third grade.

16. That more supervision be given to high-school teaching.

17. That the teachers keep more detailed records of plans and progress.

18. That efforts be made to locate by use of quantitative tests the various abilities of individual pupils in the fundamentals, and that individual and auxiliary teaching be guided to a greater extent by such standards.

19. That the present study of conditions of retardation, promotion, and elimination be continued, with the view of learning and ameliorating as far as possible the individual causes which prevail against backward and absent children.

20. That a more efficient system of ordering, purchasing, and recording supplies and equipment, and of accounting for other expenditures be adopted.

21. That a standard pay roll be adopted.

22. That the offices of school clerk and secretary of the superintendent be combined.

23. That the budget classifications recommended by the United States Bureau of Education be adopted.

24. That an annual budget and report be published either in the newspapers or as a separate document.

Leavenworth, Kans.—1. That every effort be made to close the wide gap which is conspicuous in Leavenworth between the schools and the public.

2. That other students besides those taking the normal-training course be urged to return for a year of graduate work in the high school, to be taken from studies not elected during their undergraduate career.

3. That homemakers and other over-age men and women be invited to elect specific work that will aid them to become more efficient citizens.

4. That night schools be organized and adequately provided for, to begin work at the opening of next school year.

5. That in connection with the juvenile court and the cultural and civic clubs of the city, a trained supervisor of playgrounds be employed for the coming summer to organize the people and facilities already at hand, and thus make a real beginning in the use of the summer season as an aid rather than a hiatus in educational work.

6. That social centers be established at the Morris School, the Maplewood School, and such others as can be used. Also that social and industrial centers be established at the Lincoln and Sumner Schools.

7. That every effort be made to maintain permanently the present enthusiastic parent-teachers' associations, and that their work and interest be widely extended.

8. That arrangements be made with business men to use part-time students in the commercial work and with factories and tradesmen to do the same for students in the industrial course.

9. That girls be given school credit for work properly done in the home. That the same privilege be extended to boys where the work may be considered constructively educative. Also that arrangements be made with the churches to establish actual-study classes, effectively taught, for which school credit shall be given.

10. That an employment bureau be run from the high-school principal's office to secure work for graduates and to enlist the cooperation of the business men of the community in giving the graduates a proper start in the business world.

A full report of the committee on the Webster Groves (Mo.) school survey has not yet been made. The report when completed will treat of instruction, achievements of pupils, promotion and retardation, course of study, life of the community, buildings and grounds, etc. A partial report has been made recommending that—

The domestic-science teacher be placed in charge of the high-school lunchroom, and that she correlate the work of her department as much as possible with the lunchroom.

The secretary of the superintendent of schools be made the secretary of the school board.

Two manual training and home economic centers be established for pupils in the elementary schools.

The seventh and eighth grade pupils be centralized in a junior high-school building as soon as possible.

The superintendent be sent, at the expense of the school board, to visit the classrooms of applicants for teaching positions, and normal schools and colleges to select the best graduates.

A record be kept to discover why so many teachers leave the Webster Groves schools. (No such record had been kept.)

The board no longer employ an architect, on a salary of \$600 a year, merely to inspect buildings and to recommend to the board what repairs should be made, but that a competent mechanic be employed to make repairs and to have general oversight of the buildings, and that an architect be employed only as alterations are to be made or new buildings erected.

The survey at Jamestown, N. Dak., was for the purpose of locating buildings and reorganizing the course of study. The United States Commissioner of Education spent several days in Jamestown and made recommendations as to the location of buildings, which the board adopted. He also recommended the introduction of the six-six plan and offered suggestions as to the arrangement of the course of study.

Many of the recommendations made in these surveys have been adopted. If a survey has been thorough, all the recommendations can not be adopted at once; to do so would invite disaster to a school system. The aim of a properly organized survey is to collect the facts and to interpret them and to outline a plan of action not to be accomplished at once, but within a reasonable time, as five or ten years. It is felt that a survey, to be helpful, should look to the future rather than to the present.

KINDERGARTENS.

The kindergarten has received a gratifying share of interest and attention in the smaller cities during the school year 1915-16, an appreciative stride in kindergarten extension being apparent. In the North Central States 161 cities have established 258 new kindergartens, 172 of which were established in 106 cities and towns where kindergartens had never existed as a part of the public-school system. Michigan leads this group with 30 cities and 45 new kindergartens, 28 being established in 16 cities and towns never having had public-school kindergartens; Iowa and Wisconsin follow close in line. California leads the country, having established 53 new kindergartens in 28 cities, 38 being in 19 cities and towns never having had public-school kindergartens. Montana, while it does not take the lead in the number of kindergartens established, may be especially mentioned, nevertheless, for having, in one year, changed its record of no kindergartens to 19 in 4 cities. Another noteworthy fact is that a number of kindergartens previously supported by women's associa-

tions or other private organizations have, during the past year, been taken over by public-school boards, thus proving the potential interest in this work on the part of public-school authorities, frequently called forth through this means. A typical example is Mendon, Mich., where a kindergarten was conducted for about three years, six or seven years ago. The work was under the management of the Women's Club, but funds were hard to raise, and it was therefore discontinued. Public sentiment in favor of kindergarten work continued, however, and as a direct result, the public-school board incorporated the kindergarten in its public-school system this year.

CHAPTER V.

RURAL EDUCATION.

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The year 1915-16 has brought forth nothing of a revolutionary character in rural education; progress has been in the direction of educational policies now generally accepted by educators whose interests are in the rural field. Few State legislatures have been in session during the year, which explains the comparatively small number of changes in educational policy for the schools in rural communities.

PROGRESS IN RURAL SCHOOL ADMINISTRATION.

Maryland.—The most notable action during the year looking toward an improved State rural school system was that of Maryland. The 1916 legislature made several important changes in the school laws of the State, largely as a result of the educational survey of the State made by the General Education Board for the Maryland State school committee.

Hitherto the State and county boards of education in Maryland have been appointed by the governor with the approval of the State senate. In practice the senators from the various counties have named the boards. The law has been changed so that now the boards are appointed by the governor. The State superintendent of public instruction in the past has been appointed by the governor; in the future he will be appointed by the State board of education. He will be the executive officer of the board, but will have no vote. Definite educational qualifications for the State superintendent have been fixed by law. He must be a graduate of a standard college; and he must have had, in addition, two years of postgraduate work, principally in education, together with seven years of experience in teaching, supervising, or school administration.

The State department in the past has employed, in addition to the State superintendent, a deputy State superintendent and one clerk; the new law makes provision for an assistant State superintendent, a supervisor of high schools, a supervisor of rural schools, a white supervisor of Negro schools, and several clerks.

The county boards have increased powers under the new law. They now appoint all teachers, instead of only the assistant teachers. They fix the county tax within limits of 34 and 40 cents on every \$100 worth of taxable property, the county commissioners being obliged to levy and collect the tax fixed by the county board of education, within the limits assigned.

Provision has been made for employing as county superintendents persons thoroughly qualified for the office who will be required to give their entire time to educational work. They are to be appointed by the county board, but all candidates to be eligible for appointment must hold certificates issued by the State superintendent. They must be graduates of standard colleges and have had the equivalent of at least one year of graduate training in education, with work in certain special courses, and two years' successful experience in teaching or supervision. The term of service has been increased to four years and a minimum salary of \$1,800 a year has been fixed. The State will pay one half of the salary up to \$3,000.

The State superintendent is given power to remove any county superintendent for inefficiency or malfeasance in office. The appointment of a successor is left to the county board. The law makes clear that the county superintendent shall be the actual head of the school system, being required by legislation to take the initiative in making out the annual budget, locating school buildings, etc., and he "shall nominate all assistants and all teachers for appointment by the board." The county superintendent is given the power to assign the teachers to the particular schools.

Increased supervision has been provided by requiring all counties with 100 teachers or more to employ a primary grade supervisor at a minimum salary of \$1,200. The State pays one-half of the salary, up to \$2,000. Counties with less than 100 teachers may employ such supervisors, or two counties with less than 100 teachers may appoint a joint supervisor. Every county must appoint an attendance officer approved by the State superintendent, and every county must employ at least one clerk for the county superintendent's office. One-half of the salary of the attendance officer, up to \$1,200, is to be paid by the State.

Certification of public school teachers has been made a State function. All details connected with the examinations for teachers' certificates, renewal of certificates, granting of certificates or diplomas, and the conditions under which certificates, diplomas, and degrees of institutions of the State of Maryland, or of other States, will be recognized, are determined by the State superintendent of schools. The certificates granted are as follows:

1. A certificate in administration and supervision, valid three years, issued to persons who are graduates of a standard college or university with one

year of graduate work in education, including public school administration, supervision, and methods of teaching (or who have had the equivalent), and who have had two years' experience as a teacher.

2. A certificate in elementary school supervision, valid three years, issued to persons who are graduates of a two-year standard normal school who have completed in addition two full years of academic work at a standard college, at least one-half of the time being devoted to education, and who have had four years of teaching experience in elementary schools.

3. A high-school principal's certificate, valid for three years, issued to graduates of a standard college who have had a full year of graduate work, approximately one-third of which was in subjects related to high-school branches and two-thirds in education, and who have had two years' teaching experience.

4. A high-school teacher's certificate granted to persons who are graduates of a standard college who have had at least two high-school subjects continuously for two years and not less than 200 recitation hours of instruction in education, particularly in secondary school work.

5. An elementary school principal's certificate, valid three years, required in all elementary schools having three or more teachers, granted to persons who have had a four-year high-school course, or an equivalent, and two years' standard normal school work, and in addition not less than a full half-year's work at a college in elementary school methods, supervision, administration and three years of teaching experience.

6. An elementary school teacher's certificate of the first grade, valid three years, to persons who are graduates of a four-year high-school and a two-year course in a standard normal.

7. An elementary school teacher's certificate of the second grade, valid for two years, issued to graduates of four-year high schools on examination in elementary-school subjects, but open only to those who have had at least six weeks of professional preparation in a standard institution.

8. An elementary-school teacher's certificate of the third grade, valid two years, issued to persons having less than a standard high-school course on examination in elementary-school subjects. The candidate must have had at least six weeks of professional preparation in a standard institution. This may be renewed only upon presentation of evidence of successful experience and completion of not less than six weeks' additional academic and professional preparation in a standard institution.

In addition, several special certificates are issued to teachers of drawing, music, domestic economy, etc.

The compulsory education law has been revised and made State wide. All children from 7 to 13 years of age are required to attend school for the entire period that the schools are open. Children of 13 and 14 years of age are required to attend at least 100 days, and, unless engaged in regular employment, for the entire time that the schools are open. Children of 15 and 16 years of age who have not completed the elementary schools are required to attend at least 100 days each year as nearly consecutively as possible, or their entire time if they are not in regular employment.

Texas.—The State reports that the so-called "million-dollar appropriation" for country schools is accomplishing excellent results. This appropriation was the result of an act of the 1915 legislature

appropriating \$1,000,000, one-half of which was available in the school year just closed and one-half in the present school year, to assist in providing adequate school facilities in the poorer rural school districts. The State board of education has charge of the fund. It is authorized and directed to supplement the regular State apportionment with an amount not exceeding \$500 in any one year, the amount to be determined on the merits and needs of the schools. Districts requesting aid make application on a form prescribed by the State board of education. The State superintendent is required to make investigation and approve the application before it is granted. As far as possible the State superintendent or one of his representatives visits each school requesting aid.

Before any school is entitled to receive aid, it must meet certain standard conditions. It must be located on a plat of ground not less than 1 acre in extent near the center of population of the district; it must be provided with a schoolhouse meeting the requirements of the State department in all particulars; it must be equipped with satisfactory furniture, books, maps, etc.; the teachers employed must have had professional training as well as adequate academic training and have given satisfactory service. The district receiving aid must have fewer than 200 pupils in the scholastic enrollment, the attendance record for the previous year not being less than 50 per cent of the entire time the school was in session, and the school must maintain during each year that it receives State aid an attendance record of at least 75 per cent. The school district must levy and collect a local school tax of not less than 50 cents on \$100 valuation, and the school must teach all the subjects required by the State department of education.

The State department reports in regard to the operation of the act as follows:

At this time (June, 1916) the entire amount of the \$500,000 for the current scholastic year has been distributed among the country schools of the State on the above conditions. As a direct tangible result, more than 1,300 schools have been granted aid, distributed over 175 counties, which number embraces practically all of the counties except those lying in the extreme western and northwestern portions of the State where the school districts are large and the schools small, and the usual State and local school funds are adequate for the maintenance of terms of eight and nine months schools. Many new buildings have been erected; many more old ones have been remodeled.

The average amount granted to the schools is better than \$350, and the average on the basis of counties is approximately \$2,900.

IMPROVED RURAL SCHOOL SUPERVISION.

Probably no phase of rural school work is receiving more attention than that of supervision. Wisconsin in 1915 passed a law providing for the employment of "supervising teachers" in each county.

They are nominated by the county superintendent and elected by the county committee on common schools. Only women are employed. The minimum salary is \$60 per month, the maximum \$80; traveling expenses are allowed. Counties with more than 125 schools may have two supervising teachers. The salaries and expenses are paid by the county, but the county is at the close of the year reimbursed by the State. The supervising teachers work under the direction of the county superintendent: they give their attention to the new teachers and others in need of special help. In the year the plan has been in operation much good work has been done. There are 80 supervising teachers employed.

New Jersey has provided a somewhat similar plan. The State commissioner of education may appoint in each county a "helping teacher" who shall devote all of his time, under the direction of the county superintendent, to assisting the teachers in the one and two teacher buildings, particularly those who are new in service.

West Virginia has increased the number of district supervisors during the year from 62 to 82. Virginia now has 10 county supervisors of schools for whites and 35 for Negroes. Mississippi now requires its county superintendents to devote their entire time to the work. The law has fixed the minimum salary at \$1,000 a year and the maximum at \$1,800.

CONSOLIDATION OF RURAL SCHOOLS.

More consolidated schools have probably been established in the past year than in any two previous years. This has come about through the distribution of information concerning consolidation and through special State aid to stimulate the movement provided in several States. West Virginia reports that in the 1915-16 school year 375 one-teacher country schools were replaced by larger schools with, as a rule, three or more teachers and without public transportation. Wisconsin reports a considerable number of new consolidated schools. The State superintendent says:

The interest in the subject is continually increasing, and the sentiment is growing more and more favorable.

One phase of the consolidation question that is frequently overlooked is the rather marvelous growth of State graded schools. We have now in Wisconsin almost 600 of these institutions, employing 1,450 teachers, scattered over the State. About one-half of them are doing some work beyond the eighth grade. Each of these schools really becomes an educational center which in many cases is equivalent to a consolidation center. Another phase of the consolidation work is quite prominent in the State, namely, the establishment of joint and union high schools. This is essentially a phase of consolidation for high-school purposes. In these places the elementary education is taken care of in the local one-room district schools, while the secondary education is taken care of by the large high-school district.

New York State reports that about 100 consolidated schools have been established during the past year. In one instance 11 districts have been consolidated at West Chazy, Clinton County, in the Champlain Valley; and a philanthropic citizen of that vicinity is erecting an endowed building which will be one of the most completely equipped school buildings in the State.

Deputy Commissioner of Education Thomas E. Finegan points out that as a result of this movement in the consolidation of one-room schools several schools have been organized which will do the usual work of the eight grades in the elementary course and two years of high-school work. He says:

These schools are generally known as intermediate agricultural schools. The courses of study are along the lines of agriculture for boys and domestic science and home making for girls. Teachers of agriculture have been employed in these schools on the understanding that they do continuation work during the summer. The boys who are taking the agricultural course are under the direction of this teacher, but employed in regular farm work during the summer vacation. The whole general trend in the courses for elementary schools is to include some work along agricultural lines so that the work of the school is brought into closer relation and has a direct bearing on the life on the farm. Special effort has been made to organize new schools.

Missouri reports 110 consolidated schools, 30 of which were established during the past six months. Sixty-one of the consolidated schools maintained high-school departments in 1915-16; 3 have first-class approved high schools, 8 second-class, and 50 third-class high schools. High-school courses are being introduced into the consolidated schools very rapidly; 20 or more already have announced their intention of creating such departments at the opening of the next school year.

Louisiana reports that 43 of the new consolidated schools established during the year received special State aid for erecting buildings. For each dollar expended by the State in this manner \$4.34 was expended from local funds. Other consolidated schools were established during the year which for various reasons did not receive any portion of the special State funds.

New Jersey reports much progress in consolidation; Indiana reports that 48 rural high schools were commissioned during the year, all of which are connected with rural consolidated schools. Texas reports that probably 200 consolidated schools have been established during the year.

HIGHER STANDARDS FOR THE PREPARATION OF RURAL SCHOOL TEACHERS.

The problem of securing well-prepared teachers, with correct vision of rural life, continues to be a concern to the educators of the country. The outlook for an early realization of plans to provide a sufficient

number of capable rural teachers is, however, decidedly encouraging. Eight years ago less than a half score of normal schools had specifically organized departments for preparing rural school teachers. Now 64 normal schools have such departments. In 1913, secondary schools in 12 States offered courses in preparing teachers for rural and other elementary schools. In 1916 this kind of professional preparation embraces 21 different States. Probably nothing that has been accomplished in the movement for better rural teachers recently is more encouraging than the share taken in the work by schools of education in colleges and universities and the agricultural colleges. Even the more conservative schools are now beginning to display a marked interest in helping to provide the right kind of rural teachers.

At the same time, it is well to reemphasize that the movement is still in its beginnings. It requires approximately 365,000 teachers to supply the rural schools of the country. Of these, about 92,000 leave the profession annually; meanwhile, to fill the places vacated, the colleges and normal schools supply approximately 1,000 graduates and 11,000 teachers with a little professional preparation; and the training departments in secondary schools furnish another 12,000 teachers. This leaves 68,000 rural teachers to be procured in other ways. Many of these enter upon professional work immediately from the high schools, or even from the elementary schools, with no professional preparation and little or no vision of rural school needs.

Reasonable professional standards.—Professional and academic requirements for teacher certification are being raised at an encouraging rate in a number of States, and the locally certificated amateur teacher will probably soon be a memory only in most States. Graduation from a standard four-year high school has been adopted as the minimum requirement in many sections of the country recently, and at least one semester of professional preparation in a standard normal school or its equivalent has been set in several States as the minimum professional requirement.

The Bureau of Education has recently proposed certain reasonable standards for a satisfactory State system of teacher preparation which might serve to determine the future policy of almost any State in the Union. This has resulted from educational surveys directed by the bureau in Iowa, Washington, North Dakota, and Wyoming. The proposed standards would require that ultimately all teachers of the given State should be graduates from an accredited high school and should have had at least two years of professional preparation. These standards would apply to rural teachers as well as to village and city teachers.

Proposed further training of teachers in service.—The process of eliminating the unprepared should be gradual, to permit teachers in

service to meet the new requirements without undue hardships. The conviction is growing that State departments, normal schools, and schools of education in colleges and universities can be of special assistance by organizing an effective extension service for further training of teachers in the field. In Connecticut this work is promoted successfully by the State board of education, and in Iowa on a large scale by the State Teachers College at Cedar Falls. The survey committee of the Bureau of Education for the State of Washington has proposed that the State be divided into extension service districts, one for each normal school, and that each normal school organize an extension service for its district on such lines as may appear best suited to the needs of the district and of the State. The committee favored the type of extension service utilized by the Iowa State Teachers College,¹ but it believes that the determination of the exact plan of extension to be adopted in Washington should be made by the heads of the normal schools acting in conference.

Opportunity of the schools of education.—The most serious handicap in the movement to prepare the right type of rural teachers is the lack of thoroughly prepared experts to take charge of this training. Urgent demands come for instructors from every section of the country, although the supply is, unfortunately, too small to meet the demands. Here is the great opportunity of the schools of education. The normal schools will have all they can do to prepare the immediate teaching staff for rural communities; the majority of rural supervisors, heads of normal-school rural-teacher training departments and directors of high-school training classes must have a more thoroughgoing preparation, such as schools of education should best be prepared to give.

Teachers College of Columbia University, the University of Chicago, Johns Hopkins University, Peabody College for Teachers, Nashville, Tenn., the school of education in the University of Georgia, and many other schools have begun an effective work in the new field. In the 1916 summer session at Teachers College, Columbia University, by way of illustration, several hundred mature teachers and rural leaders pursued courses in rural sociology and farm economics, rural school organization and administration, rural school management and special methods of teaching, and gardening and agriculture, together with practicums in the specific problems of rural life.

Continued improvement in normal school rural teacher-training departments.—The past year has shown further improvement in rural teacher-training work in the normal schools. The number of specifically organized departments has increased from 43 to 64, while

¹ Described in detail in the chapter on Rural Education in the Annual Report of the Commissioner of Education for 1915.

about 30 other normal schools offer general courses. In addition to this, at least 60 normal schools offer instruction to teachers of agriculture.

In the Nebraska State Normal Schools the course of study used for the preparation of rural teachers in normal school teacher-training departments may be illustrated by the following course used in the normal schools of Nebraska. This course, which was given in a modified form in the commissioner's report of a year ago, has now been further modified to meet the needs of rural teachers.

FIRST YEAR.

	Hours per week.		Hours per week.
Elements of psychology and principles of teaching -----	5	Home economics -----	5
Biology -----	3	Physiology, hygiene and sanitation -----	5
Composition and orthography -----	2½	United States history -----	2½
Agriculture, including farm accounting -----	5	Geography -----	2½
Drawing -----	5	Music -----	5
		Penmanship -----	2½

SECOND YEAR.

Rural school management, standards, and measurements -----	5	Rural economics and social leadership -----	5
Manual training -----	5	Public speaking and dramatics -----	2½
Oral arithmetic -----	2½	Open-country recreation and plays -----	2½
English -----	2½	Juvenile literature -----	5
Agriculture -----	5		
Rural methods, observation and practice -----	5		

HIGHER STANDARDS OF TEACHER-TRAINING IN SECONDARY SCHOOLS.

Teacher training in secondary schools has made steady progress during the year. It is now promoted in 21 States under the names of county training schools, teacher-training departments in connection with high schools, and teacher training as part of regular high-school courses. Oklahoma, West Virginia, and Florida have organized courses during the year.

Oklahoma has organized teacher-training departments in 42 high schools, with 500 graduates the first year. The State has begun wisely by planning the departments as a fifth or graduate year, since only graduates from accredited four-year high schools are accepted as matriculants in the new departments.

Florida grants State aid in the sum of \$500 annually to any high school in the State offering training courses, provided that the director in charge of the course receives at least \$1,000 per annum in salary. Only seven departments have so far been organized under the new act.

Under section 88 of its school laws, West Virginia has organized new "short courses" in its 6 normal schools, in a number of denomi-

national schools, and in 12 high schools. This places the study courses in secondary institutions on an equality with the short courses in the normal schools. This is accounted for in the urgent need for more trained teachers in the State.

The standards set for entrance to the training classes are being raised gradually in a number of States. Oklahoma began by accepting four-year graduates only. Ohio has two courses, one of them being for graduates only, and this course enrolls the great majority of the teachers now in training. By 1917 all teachers in the State of New York are required to have completed at least four years' work in a standard high school and to have had one year of professional training, which is the equivalent of making the New York training departments a graduate course. In Minnesota students entering these departments must possess 12 high-school credits for the year 1916-17, and, beginning September, 1917, all students taking the work must complete the full four-year high-school course. After September, 1917, the rural training course will be on a postgraduate basis. Nevada also selects its training school material from graduates of standard high schools exclusively.

In Oregon no person is now allowed to teach in rural schools who has not completed an elementary training school course. In Vermont, according to the State commissioner of education "there will be available for the coming year a trained teacher, of at least one year of training, for every vacancy that may occur in the rural schools."

Many of the training departments devote considerable time to the underlying problems of country life. They are able to imbue their students with the new rural life point of view and outlook on agricultural life. Success or failure in accomplishing these desirable ends lies almost wholly in the kind of training for their work that the directors of the departments themselves have pursued before taking up their important tasks. Specialists are required for this work, and if these have not always been found it is the business of the State department to see that they are improved while in service. How this is done in the State of Minnesota may be seen in the following suggestions issued to training-department directors by the State supervisor of teacher-training:

1. One of the chief needs for the improvement of this work is better facilities for practice in actual rural schools. To provide this, we are now developing special rural demonstration schools in connection with other departments. Last year 35 such rural schools were in operation, and about 70 will probably be established next year.

2. The most important improvement of this work will come through improving the teachers. Special summer courses at the University of Minnesota are now offered for training teachers. Seventy of the 130 teachers in the State are enrolled in these courses this summer. Others are in attendance at Colum-

bia, Chicago, and elsewhere. These courses, the annual conference for training teachers, and the increasing requirements for indorsements of teachers in this field, all tend rapidly toward the improvement of our teaching corps.

3. Another significant development for the improvement for rural teacher-training is our system of "follow up work." Under this plan all training teachers now visit, supervise, and assist their young graduates during their first year of teaching in the country. This assistance of the training teacher is realized through personal visits in the rural schools taught by graduates, through alumni associations, teachers' meetings, monthly letters, circulars, etc., and is proving most effective.

4. The increased requirements for admission of students of this course, particularly the new rules, making the course a graduate year and requiring certain prerequisite courses in the junior and senior years of the high school, are also a significant step toward the improvement of the work.

5. The increased State aid (\$1,200) now available for this work also makes possible the employment of better teachers and the purchase of better and fuller equipment.

6. Last, but not least, the employment of a special State supervisor for this work has guarded and assisted the development of the work, encouraged the teachers, and been the means of bringing about several improvements which would be impossible in States employing no special supervisor.

IMPROVEMENT IN THE RURAL SCHOOL COURSE OF STUDY.

All educators must be aware that readjustments are taking place in the material and methods used in the rural schools, but such a hold has tradition on what is taught and learned that many schools continue to cling to much of the subject matter and methods of teaching pursued by teachers of long ago. It is dawning upon teachers everywhere that there is too much of the abstract, too much of empty phrases, taught in rural schools, mainly because these things were in the course of study handed down from the past. In justice to the individual teachers it must be said that, if they had been at liberty to do so, many would have cast aside much of the traditional accumulation for which they can see no justification.

School officials, especially in rural communities, still dictate to the teachers too often what they shall and shall not teach. Likewise, the reorganization of school work is hampered by established State courses of study which were originally drawn up for the elementary schools. A few States, notably Louisiana, have undertaken to provide separate courses for their rural schools. In some State and local courses of study unavailing efforts have been made to satisfy modern demands by patching a little here and there, as with patches on an old garment, thereby overcrowding an already overloaded course. It is a mistake to think that such patchwork will satisfy the demand of the Nation's agricultural population, which is striving at this time to set its house in order in the midst of an epoch-making national transition. Before the readjustments can be realized, the course of study for rural schools must be fundamentally

recast, new textbooks must be written specifically for rural children, State and local study outlines and syllabi must be modified to suit these needs, and educators instead of laymen must decide what shall be taught and what shall be left out.

A course of study based on what rural people ought to know.—Serious questions arise as to just how far the rural schools of the Nation teach what a modern agricultural population ought to know in order to get the greatest good out of life. It is asked, Do the schools provide the kind of instruction required to keep the people in enjoyment of good health and sanitary surroundings? Do the schools prepare them to earn remunerative livings out of the land? Do they direct them to become useful, responsible members of the larger social group? And do the schools so direct the people that they will devote a well-earned leisure to ethical and æsthetical pursuits in the country for the improvement of self and the upbuilding of the community?

In 1913 the Bureau of Education began a study of what the rural population ought to know in order to live wholesome, contented, and profitable lives on the land or away from it, if they should become attracted by the call and move to city places. Rural people in every section of the country were requested to give their views. Agricultural leaders and rural-life experts in large number were communicated with on the subject. The keynote sounding through all the responses was that the school devotes too much time to acquiring the working tools of an education, because the subject matter is cumbered with all kinds of unnecessary timber and the methods of presentation of the subject matter are inadequate. Upon the whole, it was held that the schools do not devote enough time to the things which serve a real purpose. It seemed the consensus of opinion that the school should no longer limit its activities by the four walls of the schoolhouse or the two covers of the textbook. Every activity of the community should be reflected in the curriculum; the farm place, the fields, and the forest should be made laboratories for working material for the new school.

The reconstruction of the rural-school course of study is going forward in some sections of the country as a gradual evolution. Certain State teachers' associations, as those of Minnesota and Iowa, have made studies of the elementary school course of study, which recommend the elimination of a great deal of useless teaching material, and in its place suggest the introduction of new subject materials adapted to help rural people attain happy, healthful, and remunerative living conditions. To this may be added the necessity of re-directing whatever has been retained in the old curriculum after the first elimination to give a more direct application and utility.

It is encouraging to note that several national textbook publishing houses have undertaken to provide textbooks particularly adapted to rural needs. Already a number of textbooks in arithmetic, rural-community civics, and home economics have appeared, while many others are in course of preparation.

MEDICAL INSPECTION IN RURAL SCHOOLS.¹

The question of health and sanitation is receiving considerable attention in many States at this time. People are beginning to realize that too much has been left to the natural healthfulness of the rural environment and that, accordingly, the country has failed to make the most of its advantages over the city.

Health inspection in Pennsylvania rural schools.—Pennsylvania has probably done more than any other State to disclose the true facts of hygienic conditions in its rural communities. The work of inspection is in charge of the State commissioner of health and is done by successful practitioners under his direction.

It is of interest to note how at first the majority of the directors of the 2,236 school districts "clung tenaciously to the idea that country boys and girls must of necessity be sound and healthy." Many directors went so far as to write the State health commissioner declining to have their schools examined, for the reason that "as the majority of children in our district are native born, medical inspection of schools would be a waste of time and money." These school officers have had occasion recently to change their minds on this subject, since the examination shows that 94.95 per cent of the native-born children are defective physically in one way or another. The medical examinations have now become State wide. During the 1914-15 school year 469,199 children in 17,823 school-rooms were examined. This covered examinations in 2,134 rural districts of a possible total of 2,236. Of this number 335,427, or 71.48 per cent, were classed as physically defective; 318,484, or 94.95 per cent, were native born and 16,943, or 5.05 per cent, were foreign born; 83,749 children were found to have defective vision; 15,600 had defective hearing; 22,837 defective breathing; 12,322 defective tonsils; and 212,708, defective teeth. Some of the children were afflicted with many of these ailments, others with only one.

IMPROVEMENTS IN RURAL SCHOOLHOUSE PLANS AND ARCHITECTURE.

State and county reports for the past year have materially increased the space usually allotted to rural schoolhouse plans and architecture. This increased interest is general and not confined to any particular locality. A strong tendency is noted to make the

¹ See Ch. XIX, "Educational Hygiene," of this report.

one-teacher school more than a one-room school. Plans for rural schoolhouses frequently provide, besides the classroom, special rooms in the second story or adjoining the classroom, with movable partitions, for an assembly hall to be used for community gathering, another small room for a library and reading room, also a room to serve as special classroom or general utility room, where instruction may be given in manual training, domestic science, and for serving the noon-day lunch. These improvements demonstrate the possibilities for a much wider use of the one-teacher school.

Through a recent act of the State legislature, every public schoolhouse in Oregon has been made a civic center, under the control of the school board, where the citizens may engage in supervised recreational activities, and where they may discuss subjects pertaining to educational, political, economic, artistic, and moral interests of the public.

The newer rural school buildings do not follow the old traditional types. Indeed, they might easily be mistaken for attractive homes. The one-story plan is growing in favor in rural consolidated districts where sufficient ground can be purchased at reasonable prices. The advantages of this plan are, first, it protects against loss of life by fire; second, it helps conserve the health of pupils; and, third, it permits the adoption of a unit plan to which additions may easily be made without destroying the beauty of the architectural designs.

RURAL SCHOOL GROUNDS AND SANITATION.

The bulletins issued by the State departments of education giving plans of school buildings also contain model school grounds, especially for consolidated schools where large grounds and a teacher's home are essential. A plan whereby school grounds may be used to the best advantage for the purpose of gardening and play should be considered before any building is constructed. Too many school buildings in rural districts are placed upon the school lot in such a way that much of the ground can not be utilized for play activities or gardens because of the location of the school building, and the expense of moving the building is considered too great for the advantage to be gained.

The State board of health of California has issued a special bulletin, No. 10, distributed free by the school authorities of the State, in which rural sanitation is fully discussed, with special reference to conditions in the mountain regions. An earnest and effective campaign has been conducted in the mountain districts of California during the past year. Complete reports are not at this time available, but in one county 90 per cent of the 43 one-teacher rural schools were improved to conform with the State regulations.

During the annual meeting of the county superintendents of the State of Texas, held at Austin in July, the question of schoolhouse sanitation was presented. Excellent charts were exhibited showing improved plans for sanitary rural school buildings. These charts were explained by an expert from the State university.

That good janitor service is an important factor in rural school sanitation is realized by State boards of health in some States. In Salt Lake County, Utah, a janitors' institute is held annually. Every person engaged in cleaning and caring for schoolhouses is expected to attend the institute and to receive instructions from members of the board of health or others capable of giving it. In the same State an annual "round-up" is held in the Jordan District rural high school. A special feature of the program is rural sanitation, both as it applies to the rural schoolhouse and the home.

In Illinois a law was passed by the last legislature authorizing the State superintendent of public instruction to specify and publish the minimum requirements for heating, lighting, ventilating, seating, water supply, toilet facilities, and safety against fire. The county superintendent was empowered to inspect all plans for new school buildings and for remodeling old ones. The law requires old school buildings to be remodeled to conform with the regulations of the State superintendent. The penalty for noncompliance is the withdrawal of the district's share of the State distributive fund.

Alabama has issued during the year Bulletin No. 52 on "Rural Schoolhouses and Grounds," with suggestions for the erection, repair, and equipment of school buildings. This bulletin was issued as a guide to standardize the schools of the State.

Oklahoma has issued "A Guide to Better Schools," replete with suggestions for teachers, especially in regard to sanitation. The State superintendent is planning to use this bulletin as a supplement to the adopted course of study.

Texas has issued a bulletin explaining the law for constructing schoolhouses, passed by the thirty-third legislature. This law requires State approval of all school plans where the cost of the building is \$400 or over. The State superintendent remarks that—

Adequate lighting, heating, and ventilation cost but little more than inadequate and infinitely less when the cost borne by the individual of curing some disease is taken into consideration, to say nothing of the suffering and perhaps permanent injury that may result.

RURAL HIGH SCHOOLS.

The early American high schools did not operate in rural districts. They were planned for an urban population and offered studies such as urban children were supposed to need. In rural districts the

one-teacher school continued for a long time as the only school for all the children; or the children might go to town to high school, with generally disastrous results for their future as agricultural people. Some people—farmers among them—have the false notion that to differentiate between urban and rural folk in educational matters is to discriminate in favor of city children and that the whole matter is an attempt to set up an agricultural caste and to cut off rural children from the supposedly greater opportunities of city life. The whole is based on the assumption that urban life is superior to rural life, which, to thinking people at least, seems utterly without foundation.

The rural high-school course of study must be as broadly cultural as any planned for the urban population, a culture related to present and future problems rather than old traditions. But most important of all, the course of study must be rooted to the agricultural community, to the earth as source and background. The rural high-school course of study must have its basis in the new agricultural sciences and not in the old traditional studies. Ancient language will probably have no place in the new course; the mother tongue, on the other hand, will hold an important place. Pure science is largely minimized, and the applied forms will take its place. The new interpretation is well made in the four-year courses of the average North Carolina farm-life schools and in county and agricultural high schools, particularly in the Southern States, in the high schools and the consolidated schools in several of the Middle Western States, and in the associated schools of Minnesota.

*Rural high schools in the South.*¹—The South has many problems bequeathed it by a social and economic régime fast passing away. The people of the South are convinced that school education alone can solve these difficulties. To establish good schools—elementary, secondary, and higher—within reach of all the people, has become a patriotic motive in many Southern States. Public taxation and private benevolence are invoked to the cause. The old private secondary schools with their conventional studies are rapidly being supplanted by high schools of a practical sort within reach of all the people.

Perhaps the General Education Board should have credit for much of what has been accomplished the last few years for secondary education in the South, through its liberality in paying the salaries and expenses of the professors of secondary education established in connection with 11 Southern States and in appropriating funds for establishing high schools. On the other hand, this work

¹ See chapter on Rural Education, Rep. of Commiss. of Educa. for 1915.

would have been futile except for the stimulating propaganda long carried on by the Conference for Education in the South,¹ the Southern Education Board, and the Peabody Board.

Agricultural life holds important place in the southern educational reorganization. Virginia appropriates annually large sums for agricultural and manual training departments in rural and town high schools; Tennessee duplicates out of the State fund all local appropriations for the teaching of industrial subjects to the amount of \$1,500 annually; Georgia has created congressional district agricultural high schools, each with an annual State appropriation of \$10,000; Mississippi and several other States have county high schools; and North Carolina, finally, has its county farm-life schools.

ELIMINATION OF RURAL ILLITERACY.

The campaign to blot out adult illiteracy in rural communities is going forward at a very satisfactory rate. "Moonlight schools" have now been in operation since 1912, when Mrs. Cora Wilson Stewart, of Rowan County, Ky., initiated the movement. At first the schools were limited to a few remote regions of the southern mountains. Similar schools are now found in other sections of the United States. Adult aliens have brought considerable illiteracy into New England and the North Atlantic States; the States bordering on Mexico have a similar problem; the Pacific Coast States have illiterates of oriental origin. Seventeen States in all are conducting moonlight schools. North Carolina, the first State to follow Kentucky's lead, reports 10,000 illiterate adults in school in 1916. Alabama is struggling to eliminate Negro illiteracy. Oklahoma, meanwhile, is doing a similar work among its Indians, and in New Mexico an earnest campaign is on to educate a large population of Spanish American origin, the county superintendent of Santa Fe County alone reporting 1,500 grown men and women in school eager for the rudiments of an education, most of these in rural moonlight schools.

RURAL CONTINUATION SCHOOLS.

Another important problem is how best to assist the many thousand farm youth who for economic reasons can not attend school regularly or who have been obliged to leave school before attaining the degree of learning necessary for most successful living. Pennsylvania, Massachusetts, and several other States have recently established State-aided systems of continuation schools for the people, urban and rural. Several others have done this service for the city population, without including rural districts. Occasionally the people in rural districts have taken the matter into their own hands and

¹ Now the Southern Conference for Education and Industry.

have formed volunteer organizations to provide what the State has neglected to give.

Unique rural continuation schools have been in operation in Cherokee County, Iowa, for several years. They were organized by County Supt. Katherine Ross Logan, who determined to help in a practical way the "grown-ups" of the community who could not take advantage of the regular district schools. The "township special schools," as they are called, have done much to satisfy these demands. The schools are, briefly, volunteer organizations which can be adjusted to the needs of the people. They are usually in operation during the winter months, when farm folk are most at leisure. An inexpensive building is secured, either by lease or construction, with two or three rooms. A simple equipment for handwork and domestic science and a small agricultural laboratory are provided. Two well-prepared teachers usually have charge of the school, which is small—from 20 to 30 students in all. The students are people eager for instruction. The instruction is individual in nature, each one continuing study where he left off in the district school. The plan reminds one much of the Danish schools for small holders, which require no entrance examinations and give no graduation diplomas. The small-hold schools, like the Iowa system, aim to fit the studies to the exact needs of the people; to impart as large a store of culture as possible without giving the people a contempt for farm life and work with the hands.

No other State probably has been quite so successful as Massachusetts in organizing vocational education for all its people, whether living in town or in the country. The vocational schools comprise not only day schools for boys and girls, but part-time schools for young people between 14 and 16 years, and evening schools for grown men and women. The aim is to reach all the people of the Commonwealth in need of help. The schools appeal especially to young people who have left the public schools at too early an age to be effectively prepared for life's responsibilities.¹

Pennsylvania has recently inaugurated a system of State-aided vocational schools which embraces practical work in agriculture and other industrial subjects similar to the Massachusetts system.

PUBLICATIONS ON RURAL EDUCATION OF THE BUREAU OF EDUCATION.

A large number of publications on rural and agricultural education have been compiled or distributed by the Bureau of Education during the year. These include occasional bulletins and rural school letters published by the bureau, together with pamphlets and brochures published by other organizations but distributed by the bureau.

¹ For details of this work see Bureau of Education Bulletin, 1916, No. 2.

Recent bulletins of the bureau dealing with various phases of rural or agricultural education are as follows:

Bulletin, 1915, No. 32, The School System of Ontario.

Bulletin, 1915, No. 45, The Danish People's High School.

Bulletin, 1915, No. 48, Report on the Work of the Bureau of Education for the Natives of Alaska.

Bulletin, 1916, No. 2, Agricultural and Rural Education at the Panama-Pacific International Exposition.

Bulletin, 1916, No. 12, Problems Involved in Standardizing State Normal Schools.

Bulletin, 1916, No. 17, The Wisconsin County Training Schools for Teachers in Rural Schools.

Pamphlets of interest to rural educators, distributed by the bureau, were as follows:

Recreation in Rural Communities.

Minimum Sanitary Requirements for Rural Schools.

Teachers' Cottages.

CHAPTER VI.

ELEMENTARY EDUCATION.

By FLORENCE C. FOX,

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NATIONAL COUNCIL OF PRIMARY EDUCATION.

One of the most definite recent steps toward the improvement of the elementary school is the organization of the National Council of Primary Education. The object of the council is the betterment of the primary school in administration, curriculum, and quality of instruction. Its membership includes men and women in various fields of work who are interested in primary education. Meetings have been held in conjunction with the last three or four national educational meetings, and informal programs have been given. The question of freedom for the child and for the teacher has been the leading topic of discussion in these gatherings.

Through the cooperation of the Bureau of Education the reports of the meetings have been distributed to 36,000 primary teachers, and a questionnaire regarding the activities in vogue in the first three grades has been sent out with each report. The returns from these inquiries have come back in large numbers. They report on the amount of time spent, with what subjects correlated, and to what extent handwork, including modeling, drawing, painting, cutting, building on the sand table, weaving, sewing, and stenciling, have been used in each school; and to what extent games and dramatization, music, and nature study have entered into the daily program of each teacher. Later these data will be tabulated and sent out to the educational public as an exposition of the work of the primary school in the social arts and the plastic arts and crafts, as shown by the personal testimony of many teachers in the United States.

It is expected that questions of method, the best and most economical way of teaching, and many other problems pertinent to the primary school will occupy the attention of this organization from time to time, and that valuable contributions will be made to the work of investigation being carried on in the field of education.

STANDARD TESTS.

Scientific measurement in the elementary school is gradually making its way. As grade teachers become familiar with the contributions in this field, they are realizing the practical value of these contributions for the work of teaching. At the National Education Association meeting in New York in July, 1916, a Baltimore County teacher testified to the systematic use made of standard scales and tests in the schools of Baltimore County. She showed that with one group of teachers, at least, there was no longer question of the usefulness of the efficiency tests. There is evidence that grade teachers are becoming familiar by use with Thorndike's work in establishing a norm of achievement in visual vocabulary; with Gray's efforts to establish a norm for oral and silent reading which shall be a just and reasonable scale for use in any grade in any school; with Ayres's spelling scale, Courtis's norms of achievement in arithmetic, and the other beginnings of scientific measurement. Many progressive teachers are ready to believe that almost every branch of learning in the grades will eventually be standardized, and an equitable basis of comparison fixed for pupils of the same grade, for pupils of different grades, and for one school system in comparison with another. It is felt that the standard test will eventually serve a three-fold purpose—to check up the ability of the pupils in a system of schools, to furnish other schools a basis of comparison, and to furnish a basis of transfer from one school system to another.

EXPERIMENTATION.

Never before has private enterprise been so interested in promoting movements of elementary education as now. Great fortunes are placed at the disposal of educational experts to finance these movements. In normal schools, and in public and private university schools of education, new ideas are being tried. An important session of the kindergarten section of the National Education Association at New York in July was given over to a discussion of experiments going on in the field of elementary education throughout the country. Sometimes it was a matter of method—teaching biology by field excursion and contact with real living things; sometimes it was an activity—building a city with blocks on the schoolroom floor; or it might be a question of curriculum, each child working through the course of study by himself as his inclination might lead him. The desire to free the child and to help him use his own initiative seemed to be the aim of these methods. In this respect the stimulating influence of Montessori is everywhere evident. The observer is impressed with the tendency of progressive teachers to try out in an impartial way the conclusions of psychology and the scientific study of

education to ascertain the element of workable truth that may be in them.

Typical of the new interest in elementary education is the entrance of the General Education Board into this field with an important program. Through the rural school supervisors of the South and in other ways the board had already considered the elementary problem from a practical viewpoint, but only recently did it definitely enter the general field of elementary educational theory. The paper by Abraham Flexner on "The Modern School" attacks radically much of the current practice in education, with special reference to elementary education. The changes advocated, while not new to the reader of Dewey's "Schools of To-morrow," Bobbitt's "What the Schools Teach and Might Teach," and other books of the kind, are sufficiently sensational to have caused real commotion in the ranks of school men. Dr. Flexner compares the "traditional school" with the "modern school" and enumerates the defects of the former in contradistinction to the advantages of the latter. The discussion is presented, first, by a consideration of "Current Education"; second, "A Modern Conception of Education"; third, "A Modern Curriculum"; fourth, "What the Curriculum Omits"; fifth, "Extra Curricular Activities"; sixth, "Organization of the Modern School"; and seventh, "Possible Results." Another paper of the board's, Dr. Eliot's "Changes Needed in American Secondary Education," has an important bearing on the type of elementary schooling that shall precede the high school advocated.

The primary teacher interested in the practical aspects of her art will find much of real value in the sections on instruction in the survey which the board made in Maryland. Even more fruitful a test of the investigating process applied to the elementary education field should come in the board's study of the Gary schools, since the Gary experiment involves the whole problem of changes in educational viewpoint. When the Gary investigation is completed it is proposed to issue "a full and authoritative account of this interesting experiment in public education."

Recent announcements of the General Education Board also carry a statement of what is more or less of a new departure in the field of investigation, that of studying the school possibilities of the unusually gifted child. The board says: "Up to this time much special study has been devoted to improving the education of defective children, but comparatively little attention has been devoted to a systematic and thorough study of the talented child." Prof. Guy M. Whipple, who has the work in charge, will endeavor to find out "How early in their school life gifted children can be spotted, how much school time and energy they can economize, as well as how much additional training and mental equipment they can obtain during

their school years." In this connection it is worth noting that a large private school in New York City has for the past three or four years been segregating the bright pupils and grouping the slower ones in small classes under special instruction, with the result that a gain of one or two years is made in the elementary school course by the pupils of the higher ability.

That the movement in experimentation is spasmodic and intermittent, that there is a certain element of danger to the children experimented upon, and more of loss than advantage unless children are carefully guarded against certain types of experimenters, is beyond question. General supervision by a board of experts of all experiments that deal with little children, and the establishment of experiment stations throughout the country where investigations and experiments could be carried on under this supervision for a term of years, would give to the movement what it now lacks—balance, coherence, and continuity.

CITY RESEARCH DEPARTMENTS.¹

The movement in the larger city school systems to establish departments of educational research has special meaning for elementary education. The work of these departments and bureaus has contributed materially to the literature of elementary education during the year. The Boston school department's sixth circular deals with "Determining a Standard in Accurate Copying." A test was given to first-year high-school pupils in Boston to find to what extent elementary school graduates were able to meet a theoretical standard in copying. The bulletin sets forth the value of ability to copy accurately in many fields of work outside the school as well as in, and by means of scores and graphs decides that "only a very small percentage of the children tested reached the ideal of accuracy set up in the theoretically established standard." Other circulars in the series discuss "Determining the degree of difficulty of spelling words"; "Provisional courses of study for the grades"; "Supplementary lists of authorized texts"; "A syllabus for the elementary schools."

The Oakland (Cal.) bureau of research has issued several bulletins on conducting research work in the schools. How to guard the teachers' and the pupils' time against intrusion in this work and how to conduct investigations in an economical way are the main problems considered. The New Orleans bureau has published some significant data concerning the progress of children in the city schools. Measurements in elementary education, a study of delinquent and destitute boys in the city, and a vocational survey for the Central Trades School, are some of the problems that have been under consideration.

¹ See also Chap. III, p. 53.

UNIVERSITY CONFERENCES IN ELEMENTARY EDUCATION.

Dr. Charles H. Judd notes in a recent issue of the *Elementary School Journal* that—

One of the most impressive manifestations of the growing unity of the American educational system is the fact that a number of leading universities have organized conferences with the superintendents and teachers of the elementary schools. These conferences are due in part to the initiative of the department of education, but more fundamentally they are due to the universities that are beginning to recognize the general principle that a development of the science of education is a part of the business of our higher institutions.

The University of Pennsylvania has organized a schoolmen's week. At Indiana University a conference on scientific measurement has been organized, continuing the work begun the year before. The Universities of Wisconsin, Minnesota, and Iowa have brought school superintendents or supervisors together for a week of discussion of problems in supervision. The effect of these gatherings of superintendents, supervisors, and teachers for free and full discussion of practical teaching problems, against the background of modern theory, must sooner or later have an immeasurable effect upon current practice in elementary education.

CURRICULA AND METHODS.

Everywhere to-day the social aspect of education is being emphasized. Dewey tells us, in his "Schools of To-morrow," that the acquiring of information "apart from its social bearings is worse than futile"; that to train the child in modes of skill "apart from the realization of the social uses to which they are to be put is fairly criminal," and that information must always be connected up with the activities of life.

The aim is not to prepare breadwinners. But, since men and women are normally engaged in breadwinning vocations, they need to be intelligent in the conduct of their households, the care of their children, the management of farms and shops, and the political conduct of a democracy where industry is the prime factor.

Bobbitt urges that those studies which are included in the elementary school program be selected with the greatest care, for, he declares, "in view of its function, elementary education must be intensely practical, touching life at its greatest need." He would give three tests to the matter to be included in elementary instruction:

1. Is this knowledge essential to prepare the child to make a living under present economical conditions?
2. Is this knowledge essential to prepare the child to fulfill the obligations of a parent and to perform the duties of a citizen?
3. Is this knowledge essential to prepare the child for a rich and personal life and a life of rectitude in the social order?

More and more the expert in educational theory and practice insists that the curriculum shall be made practical, and not only practical but adjustable, capable of adaptation to different environments and localities. Dr. Frank McMurry has called this type of course of study "the neighborhood curriculum."

Dr. Flexner, in the paper already cited, is convinced that "our more or less monastic course of study has survived, in part, at least, because it has become a fetich, because successive generations have gone on teaching it without looking for specific results." In his modern school, children are to be taught "with an eye to the realities of life and existence," and the neighborhood in which the child lives is to be used as a laboratory for this teaching.

Let us imagine a "modern school" located in the City of New York. Consider for a moment its assets for educational purposes: The harbor, the Metropolitan Museum, the Public Library, the Natural History Museum, the Zoological Gardens, the city government, the Weather Bureau, the transportation system, lectures, concerts, plays, and so on. Other communities have less, but all have much. As things now are, children living in this rich, tingling environment get for the most part precisely the same education that they would be getting in, let us say, Oshkosh or Keokuk.

Correlation of one subject with another, and the power which one subject possesses to enhance and enrich another, are receiving more attention in elementary education than heretofore. A disposition to cut down and lop off all extraneous matter from the curriculum and then to form a close union between the subjects left, teaching them in the schoolroom as the child would find them in the world outside, marks a decided step in later school methods. Says Dr. Flexner:

The traditional school teaches composition in the English classics; quantitative work in the mathematics classes; history, literature, and so on in their appropriate divisions. Efforts are indeed making to overcome this separateness, but they have gone only a little way. The modern school would from the first undertake the cultivation of contacts and cross-connections. Every exercise would be a spelling lesson; science, industry, history, civics, literature, and geography would to some extent utilize the same material.

In the special subjects of study, the elimination of waste in arithmetic has received first attention. A revised program in elementary arithmetic is suggested in the fourteenth yearbook of the National Society for the Study of Education. The following eliminations are recommended:

Apothecaries' weight, alligation, aliquot parts, annual interest, cube root, cases in percentage, compound and complex fractions of more than two digits, compound proportion, dram, foreign money, folding paper, the long method of greatest common divisor, longitude and time, least common multiple, metric system, progression, quarter in avordupois table, reduction of more than two steps, troy weight, true discount, unreal fractions.

On the other hand, the committee recommends that increased emphasis be placed upon the fundamentals in arithmetic, viz, addition, subtraction, multiplication, division of whole numbers and fractions, and that the applications of arithmetic to the social and economic conditions of the day be given especial attention.

That "literature" in the elementary grades shall come under this pruning process and be made to serve the purpose of ethical training is another demand with considerable backing. The teachers of Chicago follow a course which was compiled some years ago by a committee of principals and teachers in the city schools, listed under the title of "Home and community," "Ideals of life and conduct," "Heroism and romance," and many others of like significance. Miss Mary McSkimmon, of Brookline, Mass., has outlined a similar course for that city. The literature for each grade is grouped about an ethical center as follows:

Grade I. The love of home and the duties of children therein.

Grade II. The love of animals and the responsibility for the care and happiness of pets.

Grade III. Love of one another; the child as an individual member of the human brotherhood.

Grade IV. The duty of self-control.

Grade V. Courage; the duty of purposeful, heroic effort.

Grade VI. Obedience, and service rendered through obedience.

Grade VII. Wisdom; service through knowledge and goodness.

Grade VIII. Patriotism; the character of a good citizen.

Grade IX. Service through character.

The national committee on minimum essentials approves this classification and the accompanying lists of selections most highly, but adds a caution against a didactic treatment of the material in the classroom.

In the study of English, the elimination of formal grammar has in some communities reached the stage advocated by Dr. Flexner:

The modern school would not hesitate to take the risk to mental discipline involved in dropping the study of formal grammar. It would, tentatively at least, also risk the consequences to correct speech involved in the same step. For such evidence as we possess points to the futility of formal grammar as an aid to correct speaking and writing.

In the teaching of beginning reading, the tendency for the last two years has seemed to be back toward the mechanical preparation on a phonic basis. While an occasional method has appeared that was based upon the technique of reading rather than on the "thought-getting" process, the general trend has been for a combination of the thought and phonic method. Recently several of the book companies have issued systems of teaching reading which are wholly mechanical for the first few weeks of school, merging gradually into the content reading after the phonic drills have been given.

The problem of reading is one of the most important in primary education at the present time. Elimination of waste is undoubtedly needed in this subject. Reports received by the Bureau of Education indicate the urgent need for investigation of the many types of methods of teaching reading. The need of experiment stations where the subject can be scientifically studied is sadly felt; to carry on a satisfactory investigation otherwise is well-nigh impossible.

THE MONTESSORI MOVEMENT IN AMERICA.

The Montessori movement continues to be of importance. New York City has been selected by those behind the movement as the starting point for a national campaign. In Greater New York there were 20 Montessori schools well established in the spring of 1916, and 10 new schools were to start in the fall. Six of these are nurseries, one being in a settlement school. The attendance numbers from 25 to 40 in each class. According to the National Montessori Association, there are now 189 "authorized" Montessori schools in the United States (i. e., schools taught by graduates or students of Dr. Montessori). Those not "authorized" in this sense, but called Montessori schools, are roughly estimated at 2,000. It is now proposed to organize Montessori elementary schools, with material and instruction adapted to elementary grade children. Madam Montessori has been working on this problem for many years, and her sets of material, together with the texts for instruction of teachers, have recently been released. The material for the nurseries, with which the United States is already familiar, is designed for children from $2\frac{1}{2}$ to 6 years of age. The new material is declared to be graded and adapted to the child's further development through the elementary school. It is a continuation of the occupations given to the children in the lower school, and includes activities for all the subjects of study, from phonetic alphabets in sand paper to complicated insets for a study of fractions and higher mathematics.

Definite work in all the subjects of study will be carried on intensively through the following divisions of instruction:

- I. Simple number, to geometry.
- II. Natural science, into biology.
- III. Sounds and phonics, to literature.
- IV. Home geography, to advanced geography.
- V. History.
- VI. A scientific study of language—English.
- VII. Dramatization, to dramatic art.
- VIII. Sound appreciation, to technicalities in music and transposition of keys.
- IX. Writing.
- X. Design, to free-hand drawing and painting.

The text includes for Part I, "The theory of elementary instruction"; for Part II, "The practical work with the materials."

NATIONAL EDUCATION ASSOCIATION.

The programs for the elementary school teachers at the recent meeting of the National Education Association were remarkably attractive. Questions for the upper elementary grades were discussed concerning transfer to the junior high school, changes in curricula, and the necessity of giving greater social, moral, and appreciative values to children of these grades.

In the joint meeting of the kindergarten and the elementary school the question of equal hours and of equal pay for teachers of both schools was discussed. Practical means of unifying the two schools were considered. It was felt that, although kindergartens and primary teachers have been debating this question for more than 25 years, only in rare instances has something really been accomplished in readjusting the programs of the two schools and bringing them into closer harmony. Modern theory asserts that much of the kindergarten material should be used in the grades. It was pointed out more than once at the New York meeting that Froebel's classes were composed of children from the elementary school, and that Froebel designed much of his system of education, especially the occupations, for older children. Dr. Merriam's practical experiment at the University of Missouri in combining and overlapping the work of the kindergarten and the primary school received consideration, and it was agreed that his program deserved to be used as a guide by those who desire to bring the work of the two schools into closer accord.

At one of the New York meetings the United States Commissioner of Education addressed a group of 90 leaders in primary education, on the need of investigation and experimentation in the field of primary instruction. He emphasized the need of the primary teacher to know why she teaches, what she teaches, and how she teaches. A plea was made for means by which investigations could be carried on under the supervision of the Bureau of Education, and the suggestion that experiment stations shall be established where experimentation could be made under scientific conditions met with cordial response from the teachers present.

CHAPTER VII.

SECONDARY EDUCATION.

By THOMAS H. BRIGGS.

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GROWTH OF HIGH SCHOOLS.

The marvelous growth in secondary enrollment still continues,¹ partly because of the increased number of high schools, partly because of provision for tuition without cost to boys and girls who live in districts without such schools, and partly because of the offering of courses to meet the needs of those who have previously left school on the completion of grade work. In almost every town a visitor is shown a new high-school building or told of plans that are under way in response to a popular demand. In this connection note must be made of occasional gifts by public-spirited citizens of high-school buildings and equipment to towns; Greenfield, Ohio, and Newport, N. H., are two places that have been thus favored recently.

Under the new law in Illinois 130 township high schools have been organized, one of them with a district including as many as 110 sections. The larger districts make possible at a moderate tax rate buildings completely equipped and an adequate corps of trained teachers. In Oregon, under the Lane law, any community or partnership of communities may establish a high school, to be maintained out of a fund raised by taxes levied on the property of the entire county. An annual sum of \$40 a pupil is paid for the first 20 pupils in regular attendance, \$30 a pupil for the next 20 pupils in regular attendance, and \$12.50 a pupil for all additional pupils in regular attendance. The Nebraska program for bringing high-school facilities to all the youth of the State, partly by a rearrangement of districts, has resulted in the establishment of 191 rural high schools during the past year, besides the addition of one year to the courses of a larger number of schools that formerly ended

¹ There were 13,922 public and private high schools in 1915, with an aggregate enrollment of 1,484,028 students, an increase of 110,367 over the preceding year. This is an increase of more than 100 per cent in enrollment since 1902.

with the ninth, tenth, or eleventh grades. South Carolina and a few other States are advocating that each county levy a tax for secondary education, the schools being located according to need by a central board. Maryland has for a long time used this plan.

CRITICISM OF EXISTING CONDITIONS.

With the rapid growth of high schools and the necessary tax levies for buildings, equipment, and maintenance, there has inevitably come criticism. Some of it is from those who merely object to paying for what they term "educational luxuries;" some is more intelligent, coming from those who, educated themselves, look on the school system as a whole and demand that each element justify itself relatively. As the number of high-school alumni increases, this latter type of intelligent criticism is likely to be heard more often. So far it concerns chiefly the cost of the high school as compared with the cost for the grades and the lack of provision in the program of studies for the needs of all the children. In his recent biennial report State Supt. Deyoe, of Iowa, expresses the caution that "no school should attempt high-school work at the expense of the work in the grades, which many districts in the State have been doing." W. H. Hand, State high-school inspector for South Carolina, declares that "little, ambitious, so-called high schools are not only hurting their few high-school pupils, but they are robbing the elementary pupils of their due." As no high school can have substantial growth unless the pupils in the grades are well trained, he recommends that 29 of the 177 high schools of the State be abolished. "My contention," he writes in his annual report, "is strong that the State's attention for the next few years should be centered upon making better high schools of those we have, and not upon establishing new ones." Supt. J. T. Giles, of Richmond, Ind., presents without comment in "A statistical study of school reports from the 25 largest cities of Indiana"¹ the ratio in per cent of the total expenditure for high schools to the total expenditure for the grades. It ranges from 58 to 13, with a median of 35. State Supt. Keeler, of Michigan, points out that it is necessary for small towns to furnish such education applying directly to the local situation as will retain young people in the business and industry of the community.

¹ Educational administration and supervision 2:305-310. Other interesting data in this report are the ratio of the total average daily attendance in high school to that in the grades, the ratio of the number of high-school graduates to the average daily attendance, the ratio of the amount paid for teaching to the total cost in high school, the average annual cost per pupil enrolled in high school, the ratio of the number of high-school teachers to the number of grade teachers, and the ratio of the average daily attendance in high school to the number of high-school teachers.

THE SMALL HIGH SCHOOL.

There is evidence from many sources that more and more the small high school is coming to be adjusted directly and surely to its community. The practical arts high school in the village of Amherst, N. H.,¹ is an interesting case in point. In the 90 or more high schools of New Hampshire, there are 55 domestic arts curricula, 8 mechanic arts, and 37 commercial; about 70 per cent of the high schools have at least one form of the practical arts. This does not mean that these schools give scattered elective or optional courses in domestic arts, agriculture, etc. It means that each school has a definite four-year curriculum with a practical arts subject as its basal subject. For example, in the agricultural course there will be a year of farm carpentry, a year of forge work, and four years devoted to agronomy, horticulture, animal husbandry, farm management, etc. Publications by the State department of education show that New Hampshire is also doing much to improve the courses of study in academic subjects. In Michigan a pupil may get 17 hours of agriculture in one six-year course or 24 hours of household arts in another.²

Statements of principles in several reports show the tendency regarding small high schools. Supt. Deyoe, of Iowa, writes:³

The prosperity of every nation has depended in all time on two fundamental things: The development of agricultural resources and the development of educational opportunities. The rural high school is admirably located for serving to strengthen both of these important factors in our national life. A critical choice of subjects is especially important in these small schools. At present these institutions are compelled to neglect the college entrance preparation of a few, or to disregard the needs of a large majority whose education is completed with the local school, or to attempt too much work for the limited teaching force by trying to do both. The advice given to these schools is that they serve the community first. * * * The broader we can make the course of study the greater we can make the number of graduates, the greater the number inspired to take advanced training, the greater the community is strengthened, and the greater the service to the Nation.

After showing that in the 64 two-teacher high schools of Maine most of the work is still formal and of questionable value to the small community, former State Supt. Payson Smith writes in his report for 1915:⁴

In arranging a program of studies for these [small] schools two things may be done: The subject matter and aims may be modified while the subjects themselves are retained, or special subjects may be introduced. In either case in attempting such a program some traditions may have to be sacrificed and a few pupils denied the privilege of studying certain subjects.

¹ Bull. No. 62, Dept. Pub. Instruction of New Hampshire.

² For agriculture in high schools, see Ch. XIV.

³ Biennial report, pp. 61-62.

⁴ Pp. 25-26.

There are at least three factors in such a program which may be made use of at once in any of the schools. First, every opportunity for relating the work of the school to the home interests of the children should be utilized. Second, each subject of the curriculum should have a direct, immediate, and tangible influence in the development of the pupil; that is, if geometry is taught it must be for its effect on the growth of the pupil rather than for its value as a preparation for advanced mathematics in college. Third, the interests of the many who will not go to college should not be sacrificed because of demands which the colleges make upon the few who may enter. When the community attaches as much importance to the service the school has rendered those who remain at home as those who go to college, the last condition will be speedily adjusted. Thus the first move in a more rational program is largely a teaching problem dealing with the subject matter and aims of instruction.

The program will need to be adjusted further by introducing subjects or courses which will touch more directly community interests and by giving to them prominence and dignity. A careful study of the careers of the pupils after leaving school, not overlooking those who left school before completing the course, and of the major community interests will suggest the kind of work to be developed. As a result of such a study it may be found desirable to introduce a course in agriculture, household arts, commercial work, and the like, replacing one or more of those now offered.

MEASURED RESULTS.

In the larger high schools there is an unquestionable improvement in details of administration and instruction. Not only from the published reports, but also from observation, it is found that nearly every school is "trying out" some plan to increase its effectiveness to the community as a whole and to the individual pupil. The difference between the general practice a decade ago and the tendency to-day is manifest in the type of articles appearing in educational magazines. Formerly it was stated that such and such results "should follow" from a proposed plan, now that such and such measured results have followed from a procedure, the details of which are given. The Fifteenth Annual Report of the Board of Education of Decatur, Ill., presents some interesting results of a study of the high school by its teachers. Besides the statistics of enrollment, distribution of scholarship marks, withdrawals with causes, and tardiness, there are data concerning subjects desired by the pupils, home study, occupations of fathers, occupations chosen by pupils with reasons, outside work done by pupils, voluntary reading of newspapers, magazines, and books, number of motion-picture shows attended, expectation of entering college, and other subjects—all useful to an intelligent principal in adapting the offerings of his school to the needs of its pupils. For careful cooperative experimentation and a wider publicity of results there has been formed the National Association of Principals of Secondary Schools.

Some use has been made in high schools of the existing scales for measuring ability in reading, language, composition, penmanship,

and drawing, and there is a marked need for standard measures in other secondary school subjects. Already, it should be noted, Monroe, of Kansas, Rugg, of Chicago, and Childs, of Indiana have done much to standardize tests in algebra; Hanus, of Harvard, has published a preliminary study of ability in Latin; and Starch, of Wisconsin, has made an effort to find the effects of the study of modern foreign languages. One study now under way attempts to ascertain what standards of English composition are considered "passing" in each of the four years of representative high schools throughout the United States. At Topeka the high-school teachers have made their own standards for what should constitute a passing achievement in English composition, in Latin, and in German.

SUPERVISED STUDY.

Among innovations nothing is more widespread than supervised study. A large number of schools from all parts of the country, particularly in the Middle West, are reported to have adopted a longer period, usually of 60 minutes, which is divided more or less freely for recitation and for supervised study. This plan, which is especially popular in junior high schools, almost of necessity results in a longer school day. The results seem to be generally satisfactory. A number of principals, however, report that they have found among their teachers marked uncertainty as to what factors go to make up good study, and a further difficulty in persuading even those teachers who profess enthusiasm for the divided period plan to exchange "teaching" at the middle of the period for the opportunity to supervise study. In one school, in which the exact division of time was left to the teachers' discretion, the pupils were forced to petition the principal to indicate by a gong when they should be permitted to study. It is evident that one good feature of the plan is that it forces upon teachers a consideration of the whole problem of study. Prof. Hall-Quest's new volume on "Supervised Study"¹ conveniently summarizes almost all recent investigation of the subject. Other helpful publications during the past year are Miss Busch's "The Use of Study Halls" (*Educational Administration and Supervision*, 2:235 f.), "Study Helps for Students at the University of Chicago High School" (*School Review*, 24: 358 f.), and Prof. Whipple's precepts in *School and Home Education* (January to June, 1916).

SCHOOL RECORDS.

As may be seen from the published surveys, annual reports, and magazine articles, there are now generally being made comprehen-

¹ Macmillan, 1916.

sive and intelligent studies of school records, attendance, elimination and its causes, distribution of pupils by curricula and by subjects of study, distribution of pupils' grades by subject and by teacher, failures and their causes, and the distribution of graduates. As typical of the studies of the causes of withdrawal the reports at Minneapolis, Topeka, Des Moines, and Lincoln, Nebr., may be cited. At Lincoln a "committee for recovering the lost" personally looked up 479 pupils who dropped out of school during 1914-15 and induced 336 of them to return. Much attention seems to be given to systems of marking pupils on work done. Missouri and New Hampshire give in their publications special consideration of the matter, so that marks given shall be generally meaningful, while Topeka and other cities publish the distribution of marks by subject and by teacher so as to insure more uniformity of practice. Principal F. W. Johnson and his colleagues at the University of Chicago High School are chiefly to be credited with transferring from the colleges to high schools a system of giving weighted credits, ranging from eight-tenths of a credit for barely passing work to one and two-tenths for highly superior achievements. The most important study of the year concerning the distribution of high-school graduates is that by Prof. Pittenger.¹ He shows that of 2,426 graduates of 118 high schools in five North Central States for whom the necessary data were obtained, about four-fifths of the whole number in the graduating classes, 50.4 per cent entered higher institutions of learning. He also presents tables showing the employment distribution, the training distribution, and the relation of high-school scholarship to future employment and training.

STANDARDS AND PRINCIPLES.

Mention was made last year in this report of standards set up by several State departments of education for improving secondary schools. The number of States presenting such standards has markedly increased, and there is evidence, especially where the State makes a direct financial contribution to schools qualifying under the standards, that improvement of various kinds has resulted. A reading of the several sets of standards makes it evident that those first published have had a marked influence on the later ones, that for entire clarity the educational principles on which the standards rest should be presented, and that the indefiniteness of many items needs to be remedied. A statement that "the laboratory equipment must be adequate" or that "teachers must be satisfactorily trained" leaves the decision in each case precisely where it was before standards were published, with the inspector. Fortunately most of the items are so definite as to make decisions largely objective.

¹ School and Society, 3:901 f.

Many of the standards apply to the qualifications of teachers and principals. Occasionally an inspector, lacking the power that comes from administering a State fund for secondary schools, attempts to improve standards by exposing "graduates of reputable colleges (who) go into high schools to teach subjects they have never studied outside an inferior high school before attending college" or who of necessity use translations in the preparation of their lessons. New Hampshire publishes the rating by superintendents of 147 young teachers distributed according to the colleges from which they graduated in 1914 and 1915. Missouri insists that "in securing properly qualified teachers the first problem is to know definitely what subject or subjects each teacher is to teach. So far as possible the work of each teacher should be limited to one or not more than two subjects." The evidence is that the standards are improving and that an increasing proportion of candidates are meeting the higher requirements. West Virginia reports that 85 per cent of all its teachers in standard four-year high schools are now college graduates.

A matter almost as important as the securing of good teachers and principals is that of retaining them in a school and of improving their effectiveness in service. Louisiana reports a slight improvement in the matter of tenure, the number of principals serving their first year in a school decreasing 3.5 per cent. In Massachusetts, where about two-fifths of the high-school principals have occupied their positions for less than two years, it is proposed that the State pay a direct bonus for continuous service. The State agent for secondary education has outlined the following program for the improvement of instruction in high schools:

1. Extended and thorough preliminary training of high-school teachers, either in existing institutions or in a school maintained by the States especially for this purpose.

2. A systematic training of high-school teachers in service.

3. An annual institute for high-school teachers, lasting several days.

4. The preparation of manuals on the teaching of high-school subjects. Each manual should contain—

- (a) A statement of aims in the teaching of that subject. Because wide differences of opinion exist regarding the objectives in nearly every high-school subject, the majority of teachers are disposed to follow the traditional conceptions. Therefore State authorities should examine new statements of purposes, and when these are found valid indorse them. When traditional aims are still tenable their restatement in precise terms will give teachers greater confidence in their work.

- (b) A description of methods. Since methods effective for a subject taught with one end in view may be futile and harmful when the aims are changed, new methods should be presented and illustrated by numerous specific examples. In subjects and topics in which the traditional aims still hold good a description of approved methods would be helpful to many teachers.

(c) A statement of the content of the subject under consideration, with detailed suggestions as to specific values and special methods for various topics. This statement should indicate which topics are of greatest value. In such subjects as civics, general science, and literature it is especially important that the specific value of various topics, experiments, and selections should be explained.

(d) Methods of measuring results in teaching. A redefinition of aims involves new methods of measuring results. Each manual should show both the values and the limitations of traditional methods of measurement and suggest new methods.

Beyond all the problems of administration and instruction lies that of the real purposes of secondary school education. These purposes need to be determined and stated so clearly and so cogently as to influence directly all the details of the programs. So much is obvious, and yet it must be admitted that a serious examination of reports, of declarations of standards, and of practices reveals no definite principles commonly accepted. John Dewey, in his "Democracy and Education," has made a serious attempt to formulate a directing philosophy. It can hardly be questioned that any philosophy of education, especially that concerning secondary schools, will be materially affected by the European war. The most serious continuous effort to meet this problem has been found in the conferences directed during the past year at Teachers College, Columbia University, by Dean James E. Russell.¹ The influence of the war has already become manifest in the legislation of various States to provide military training² and in the increased efforts to use effectively secondary schools in the teaching of American ideals.

COMMISSION ON THE REORGANIZATION OF SECONDARY EDUCATION.

No single agency is doing more to make definite the aims of secondary schools and to outline a program that will improve their practice than the National Education Association commission on the reorganization of secondary education. This commission is constituted as follows:

The reviewing committee consists of 26 members, 15 of whom are chairmen of committees, and 10 are members at large.

MEMBERS AT LARGE.

P. P. Claxton, United States Commissioner of Education, Washington, D. C.
 Thomas H. Briggs, associate professor of secondary education, Teachers College, Columbia University, New York, N. Y.
 Alexander Inglis, professor of secondary education, Harvard University, Cambridge, Mass.
 Henry Neumann, Ethical Culture School, New York, N. Y.
 William Orr, deputy commissioner of education, Boston, Mass.

¹ Teachers College Record, 1915-16.

² See Ch. XIX, Educational Hygiene; also Ch. II and Ch. III.

- William B. Owen, president, Chicago Normal College, Chicago, Ill.
 Edward O. Sisson, commissioner of education, Boise, Idaho.
 Joseph S. Stewart, professor of secondary education, University of Georgia, Athens, Ga.
 Milo H. Stuart, principal, Manual Training High School, Indianapolis, Ind.
 H. B. Terry, high-school inspector, Madison, Wis.

CHAIRMEN OF COMMITTEES WHO ARE MEMBERS OF THE REVIEWING COMMITTEE.

- Administration of High Schools—Charles Hughes Johnston, professor of secondary education, University of Illinois, Urbana, Ill.
 Agriculture—A. V. Storm, professor of agricultural education, University of Minnesota, St. Paul, Minn.
 Ancient Languages—Walter Eugene Foster, Stuyvesant High School, New York, N. Y.
 Art Education—Henry Turner Bailey, Newton, Mass.
 Articulation of High School and College—Clarence D. Kingsley, high-school inspector, Boston, Mass.
 Business Education—Cheesman A. Herrick, president Girard College, Philadelphia, Pa.
 English—James Fleming Hosis, Chicago Normal College, Chicago, Ill.
 Household Arts—Amy Louise Daniels, University of Wisconsin, Madison, Wis.
 Manual Arts—Wilson H. Henderson, extension division, University of Wisconsin, Milwaukee, Wis.
 Mathematics—William H. Kilpatrick, professor of education, Teachers College, Columbia University, New York, N. Y.
 Modern Languages—Edward Manley, Englewood High School, Chicago, Ill.
 Music—Will Earhart, director of music, Pittsburgh, Pa.
 Physical Education—James H. McCurdy, director of physical education, International Y. M. C. A. College, Springfield, Mass.
 Sciences—Otis W. Caldwell, School of Education, University of Chicago, Chicago, Ill.
 Social Studies—Thomas Jesse Jones, Bureau of Education, Washington, D. C.
 Vocational Guidance—Frank M. Leavitt, professor of industrial education, University of Chicago, Chicago, Ill.

During the past year the reviewing committee has spent eight days in executive session—three at Chicago in November, three at Detroit in February, and two in New York in July. It has approved for publication the reports on social studies, English, ancient foreign languages, modern foreign languages, manual arts, music, and vocational guidance. The commission hopes to complete during 1916-17 reports on all the subjects of study. These reports are later to be published by the United States Bureau of Education.

THE JUNIOR HIGH-SCHOOL MOVEMENT.

Interest in the junior high school or intermediate school movement continues without apparent abatement, as evidenced by programs of educational meetings and the contents of magazines; and from all quarters of the country it is reported that schools of the new type have been organized. Both public and private reports of the

details of many of these schools raise the question as to whether or not the movement is spreading more rapidly than is warranted by the programs proposed. The arguments for the junior high school have apparently led many schoolmen to think that the adoption of the new organization is in itself sufficient, whereas it is chiefly an opportunity for more easily effecting desired reforms in courses of study, methods of teaching, and social administration. Unless there are sound ideas of reform in these details, there seems to be little, if any, justification for a reorganization of the grades. So far it is not obvious that the junior high school has contributed to educational progress anything that does not already exist somewhere in elementary or secondary schools, nor is it likely to do so; but if it enables foresighted administrators more easily and effectively to assemble existing advantages in practice, it will more than justify itself. If the junior high school means opportunity, it also means hard work and much of it.

The problem clearly concerns two different types of organization: The urban junior high school, whether in a separate building or incorporated with an elementary school or a senior high school, and the rural or village junior high school extending through the ninth or tenth grades. The latter type of school, which has been discussed somewhat in an earlier section of this report, is promoted "to extend secondary education to all the children of all the people"; but there is a difference in the conception of what secondary education is. Some State administrators are content to extend the traditional subjects and methods, while others are eager to adapt the work primarily to the immediate needs of all the boys and girls of secondary school age. In the urban type of junior high school almost everything imaginable may be found. Interesting developments are found at Lewiston, Idaho; Montclair, N. J.; Richmond, Va.; and Solvay and Rochester, N. Y. The program followed in the last-named city is admirably presented by Supt. Herbert Weet in recent issues of the *School Review* and *Educational Administration and Supervision*. The unsavory fact must be noted that several of the largest American cities are proposing to establish junior high schools primarily because of an apparent financial economy, it being cheaper to accommodate ninth-grade pupils in elementary school buildings and to teach them with elementary-school teachers than to duplicate facilities now provided. It is hoped that the authorities have better reasons for the proposed change of organization than they publish. Because of conditions that seem to many dangerously chaotic, the General Education Board has provided for an extensive study to ascertain what is actually done in existing junior high schools and to make public what is proved to be most successful.

THE HIGH SCHOOL IN THE SURVEYS.

Despite the fact that it is much more difficult to measure the differentiated work of the high school than the relatively uniform work of the elementary grades, school surveys are concerned more and more with secondary education. Of necessity in the present state of the development of standard measures, the surveys have for the most part studied the relations of high schools to the elementary schools and to the colleges, the physical equipment, salaries and tenure of teachers, costs, and the retention and grading of pupils. Reports of five of the more important surveys—of Boston, San Francisco, Los Angeles, St. Louis, and Nassau County, N. Y.—have not yet been published. It is interesting to record that two of the best known private schools, St. Paul's, at Concord, N. H., and St. Mark's, at Southborough, Mass., have been studied by professors of education.

The Maryland educational survey commission gives on pages 84-87 of its report information concerning the retention and distribution of children 14 to 15 years of age. The Wyoming commission criticizes the inadequate provision made for vocational guidance and industrial education and recommends the establishment of "more high schools located in such a way as to serve the largest number of children," and also the revision of courses of study, particularly with respect to more and better vocational training. After presenting facts concerning the growth of secondary education in the State, the committee investigating education in Washington points out that although "State higher education in Washington * * * rests almost entirely upon facilities for secondary education *within the State* the standards and equipment of more than two-thirds of the high schools of Washington do not yet justify their approval by the State board of education." The report on higher education in Iowa also traces the healthy growth in secondary school enrollment and states that—

Iowa's secondary school system, viewed as a whole, offers a channel between elementary and higher institutions remarkably free from obstruction. It has undoubtedly been one of the most effective agencies in the popularizing of higher education. Indeed, a mere statistical summary shows that the State has gone far toward the creation of a thoroughly coordinated State system of public education.

It criticizes sharply, however, the relative neglect of the small rural high school, and, further, the fact that these small high schools and the larger urban high schools are judged by two different sets of officials using two different standards. It concludes that "the stage is set for lack of harmony, misunderstanding, and eventual conflict."

"A Practical Study of Elimination of Pupils from the New Orleans Schools" presents the extent and causes of high-school elimination

at different school ages, months in which elimination was greatest, the vocational preferences of those eliminated, and the pupils' opinions as to why they and others entered high school; as to the popularity of courses taken, as to the value of secondary school education, and as to the causes of elimination. The bureau of educational measures and standards of the Kansas State Normal School shows that the power of retention of the Leavenworth High School is considerably greater than that of the average high school in Kansas or in the whole of the United States. It examines the practice in teaching nine groups of subjects and makes recommendations for the reorganization of the work within the subjects and for the correlation of the work in two or more departments. It further urges the addition to the curriculum for all pupils of fine arts and music.

The most extended study of high schools is presented in "Measuring the Work of the Public Schools," one of the volumes issued by the Cleveland educational survey. Following are the summaries of the two chapters particularly concerning the secondary schools:

This [eighth] chapter deals briefly with the relation between elementary schools and high schools, chiefly with that aspect of the matter which has to do with the lower school.

(1) It is shown that the relation is growing more intimate, in view of the increasing attendance on the high schools.

(2) It is pointed out that special types of organization, such as departmental courses and the junior high school, are arising to bridge over the gap.

(3) It is shown that the better pupils from the elementary schools are the ones who most commonly go on.

(4) A device for rating the elementary schools in terms of the success of their pupils in the high school is described, and a full table of elementary schools is presented.

The chapter closes with very urgent recommendations looking toward the more intimate cementing of elementary schools and high schools.

The ninth chapter sets forth facts showing:

(1) That the students entering the different types of high schools are very different in the ranks which they received in the elementary schools, in their ages, and in their ability to hold their places in school.

(2) That the marking systems in the various schools are in a measure affected by the quality of students entering, but in a larger measure by special policies in the individual schools.

(3) The failures and cases of repeaters in the various schools contribute further evidence that there is the widest divergence in standards.

(4) The reports on enrollment show that the system has not had a symmetrical and wholesome development.

(5) The reasons for favoring the enlargement of the course of study in all schools rather than the further divorcement of technical and commercial courses from academic courses are reviewed.

(6) Comments on the problems of the junior high school are added.

The recommendations which are suggested by these findings are all directed toward the establishment of standards and the development of richer courses. It is pointed out that these ends can not be attained without more highly centralized control.

CHAPTER VIII.

HIGHER EDUCATION.¹

By SAMUEL P. CAPEN,

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SUMMARY.

There have been few new movements in the field of higher education during the year under review, and few new important establishments or foundations. Nevertheless, progress has been visible, even if not registered in any spectacular manner. There have appeared numerous studies and investigations relating to various phases of institutional management. The field of higher education has until very recently been seldom invaded by the educational investigator. Efficiency tests and statistical measurements have been applied with increasing frequency to the work of the lower schools, and a voluminous literature in which the results are recorded has already grown up. The literature of higher education is still preponderatingly of the naively philosophical order. The majority of those who have written (and who still write) about the college and university are apparently committed to the method in vogue before the "Novum Organon" burst through the thickets of scholasticism. There are many works which tell us what the authors think a college ought to be; many which give the writer's interpretations of the spiritual aspects of college education; not a few which, based on dogmatic postulates, discuss the values of various elements in the college curriculum. The records of the actual facts conditioning collegiate education have thus far been disappointingly rare. The present year has, however, seen the publication of a larger number of such intensive studies than any previous annual period. The review of some of this new literature is essential to a record of higher education in 1915-16, not only because of the important facts which it reveals, but because of the tendency it represents.

A double movement appears to be going on with respect to entrance requirements. Although the major part of the institutions of the Northeast seem to be dedicated to the proposition that the chief emphasis in requirements for admission must be placed upon qualitative tests, there appears even in this section a sudden if not alto-

¹ See also Bulletin, 1916, No. 46: "Recent Movements in Higher Educational Administration."

gether unexpected reversion to the type of relation with secondary schools that has prevailed in the West. In other parts of the country the movement for increased quantitative requirements for admission goes forward.

Perhaps few persons, even among those engaged in educational work, are aware of the large number of voluntary associations, national or sectional in their membership, which deal wholly or in part with college and university problems. From time to time the establishment of new organizations has been noted in these reports. Although the foundation of but one such body is recorded this year (the Society for the Promotion of Training for Public Service), meetings of the following organizations have been held at which topics of importance to higher education were discussed:

American Association of Collegiate Registrars.

American Association of University Professors.

Association of American Agricultural Colleges and Experiment Stations.

Association of American Colleges.

Association of American Universities.

Association of Business Officers of the State Universities and Colleges of the Middle West.

Association of Colleges and Preparatory Schools of the Middle States and Maryland.

Association of Colleges and Secondary Schools of the Southern States.

Association of Urban Universities.

College Entrance Examination Board.

National Association of State Universities in the United States of America.

National Conference Committee on Standards of Colleges and Secondary Schools.

New England Association of Colleges and Secondary Schools.

New England College Entrance Certificate Board.

North Central Association of Colleges and Secondary Schools.

Society for the Promotion of Training for Public Service.

Society for the Promotion of Engineering Education.

Land Grant College Engineering Association.

Possibly of the greatest significance were various discussions, which in some cases led to action, relating to questions of classification and standardization. These questions were taken up especially by the National Conference Committee on Standards, the Association of Colleges and Secondary Schools of the Southern States, the Association of Agricultural Colleges and Experiment Stations, the North Central Association of Colleges and Secondary Schools, and the Association of American Colleges. At the meeting of the last-named association a very remarkable report entitled, "The Efficient College" was presented. The report describes (1) a hypothetical institution called "The Minimum College"; (2) another imaginary organization which is theoretically efficient; and (3) for purposes of comparison the actual status of five existing institutions.

Few State legislatures were in session in 1916. Consequently the grist of bills relating to higher education has been small. The reorganization of administrative machinery in Maryland¹ and the movement for the establishment of a State university in Massachusetts deserve special mention, however, in a review of higher education.

The question of academic freedom remains one of the vital issues in university and college education. Its remoter implications involve the whole question of institutional control and touch upon the obscure relationships of institutions and large accumulations of property. The final adjustment of the issues does not appear to be in sight. As has already been reported, the question has been the subject of several investigations by the American Association of University Professors. Four new reports by committees of this body during the past academic year constitute valuable additions to the discussion of the subject.

UNIVERSITY SURVEYS.

University surveys have undoubtedly occupied the forefront of attention in the field of higher education during the academic year just completed.

The most important of these surveys are those which have been made under the direction of the Bureau of Education or in which the bureau has participated. These have involved the State higher institutions of Iowa, the State higher institutions of North Dakota, the University of Oregon, and the State higher institutions of Washington. A brief account of the survey of the University of Oregon was included in the Report of the Commissioner of Education for 1915.

SURVEY OF STATE-SUPPORTED HIGHER INSTITUTIONS OF IOWA.

In May, 1915, the Iowa State Board of Education requested the Commissioner of Education to undertake the direction of a survey of the higher institutions of the State.

The board presented to the commissioner a bill of particulars asking that inquiry be made into a number of matters, of which the following were perhaps the most important:

Duplication in courses in education and psychology between the State university and the College of Agriculture and Mechanic Arts.

The extent to which liberal arts courses are offered at the College of Agriculture and Mechanic Arts.

The status of graduate work at each of the three institutions.

The feasibility of consolidating extension work.

The adequacy of the educational plants and the economy exercised in their use.

The Commissioner of Education appointed to conduct the survey a commission composed of the following persons: Dr. James R.

¹ See Ch. II, p. 19.

Angell, dean of the faculties of arts, literature, and science of the University of Chicago; Dr. Kendric C. Babcock, dean of the college of arts and sciences of the University of Illinois; Dr. Liberty H. Bailey, formerly director of the New York State College of Agriculture; Mrs. Henrietta W. Calvin, specialist in home economics, Bureau of Education; Dr. Hollis Godfrey, president of Drexel Institute, Philadelphia (consulting member); Dr. Raymond M. Hughes, president of Miami University; Dr. Samuel P. Capen, specialist in higher education, Bureau of Education (chairman).

The completed report was placed in the hands of the State board of education on February 15, 1916, and has since been published as Bulletin, 1916, No. 19, of the Bureau of Education.

The report is especially noteworthy, among other things, for its enunciation of the principle of "major and service lines." It declares:

In dealing with the problems of duplication as manifested in the practice of the Iowa State institutions, the commission has been guided by what may be described as the principle of "major and service lines" of work. In accordance with this principle, each State institution should have assigned to it certain major fields which it may be expected to develop to their fullest extent. Agriculture at the State College of Agriculture and Mechanic Arts is such a major line. Latin, German, French, political science, and psychology at the Iowa State University are such major lines. Service lines are such subordinate subjects as are essential to the proper cultivation of a major line. The amount required is generally not large. English is such a service line for engineering and agriculture at the State college. Institutions may well overlap as regards the relation of their service lines to one another, and more particularly as regards the relation of their major to their service lines. English is a major line at the State university and a service line at the State college, but there should be no material overlapping of major lines.

The report of the commission recommends reorganizations which are strikingly similar to those contemplated in the order of the State board of education issued in 1912, but afterward rescinded in response to legislative action and public protest. The report makes clear that the commission approached the study of the situation without preconceptions and with no intention of proposing radical changes in the functions of the institutions. It was led to its conclusions by the force of the facts.

The portions of the Iowa report involving general administrative matters and broader questions of State policy will no doubt be more widely read and discussed by students of education than any others. University administrators, however, are likely to be quite as much interested in several devices for presenting educational and financial data bearing upon efficiency of institutional management.

Notable among these is the method utilized for presenting the expenditures of the three institutions analyzed in a special form of

diagram originally used by the administration of Miami University, Ohio.¹

Another interesting and novel arrangement of institutional expenditures and their proper apportionment among the students in attendance appears in the chapter on building costs.

Bearing on the question of the utilization of the plant for teaching purposes, the report contributes a technical chapter containing the results of a careful engineering study of a group of typical buildings at each institution. The method of this study should prove valuable, not only for Iowa institutions, but for universities and colleges in general. The available building space is first divided into instructional space (defined as space used for the primary function of the institution—teaching—and distinguished by the presence of a student or a group of students for the purpose of instruction), and accessory space (defined as space not used specifically for teaching purposes, but to a large degree essential to the plant because of the physical features of building construction and the needs of the administrative functions). Although waste or efficient use may equally well occur in instructional or in accessory space, attempt is made to study merely instructional space and its relation to the whole plant. Instructional space is further divided into scheduled and unscheduled space. Scheduled space is that for which the commission received a statement of definite student capacities and definite hours of actual use for teaching purposes. For unscheduled space such information was not furnished. It appears that at the State university 39.75 per cent of the total building space is instructional space, at the State college 44.15 per cent is instructional space, and at the State teachers' college 44.87 per cent is instructional space. The scheduled space is then analyzed to show the occupancy and time ratios, i. e., the proportion of time out of a working week of 44 hours that each room available for teaching is occupied to its full capacity. These ratios are first determined for each scheduled classroom or laboratory, then for the scheduled instructional space of each building, and finally in the same manner for the whole plant. The per cent of plant utilization results when the combined occupancy and time ratios are multiplied by the per cent of scheduled instructional space. According to this calculation, the State university showed an average plant use for teaching purposes of 19.8 per cent, the State teachers' college of 23.9 per cent, and the State college of agriculture and mechanic arts of 26.4 per cent. The report takes pains to caution the reader against an interpretation of these figures too unfavorable to the efficiency of the management of the institutions. The percentages seem low, but it is pointed

¹ For a detailed statement see Bulletin, 1916, No. 19. The method is also discussed in Bulletin, 1916, No. 46.

out that 100 per cent utilization is absolutely impossible. Moreover, there is as yet no norm of possible use. No comparable studies have been made, except of one city institution (Drexel Institute), where conditions favor an extremely high per cent of utilization. That study and the present one, however, indicate that 40 per cent of utilization would be very high indeed, and that 35 per cent would represent rarely successful utilization for a State university. The conclusion drawn from the results shown by the three institutions here studied is that some economies in the use of buildings can be secured without noticeable hardship either to the students or professors, by careful rostering of available classrooms and by preventing department heads from preempting valuable space for fancied departmental needs or for exhibition purposes. The relatively high per cent of utilization at the State college is chiefly due to the care there exercised in these matters.

The chapter devoted to the work and remuneration of the instructional staffs of the three institutions proposes certain standards and makes use of at least one new unit of measurement. Three standards relate to the size of classes. They are:

(a) In lecture work a professor may meet effectively as many as can comfortably see and hear him.

(b) In recitation or quiz, 30 in a section is probably the largest number that can be effectively handled, but the desirable maximum would be from 20 to 25.

(c) In laboratory work it is commonly agreed that one instructor should be provided for every 15 or 16 students.

The new unit is the "student clock hour," which is defined thus: "One student under instruction in lecture, quiz, or laboratory for at least 50 minutes net, represents one student clock hour."

The report also proposes one other standard, namely, the minimum average salary for a department in institutions of collegiate grade. This, it is affirmed, should be at least \$2,000 a year.

SURVEY OF THE STATE HIGHER INSTITUTIONS OF WASHINGTON.

Mention was made in the last annual report of the creation by the Washington Legislature, in 1915, of a commission composed of six members of the legislature, charged with the duty of making a comprehensive survey of the State university, the State college, and the three State normal schools, and such general survey of the public school system as might be necessary. The commission was given authority to employ experts. It requested the assistance of the Commissioner of Education, who appointed the following persons as a committee to investigate the institutions and to report their findings to the commission: Samuel P. Capen, specialist in higher education, Bureau of Education (chairman); Alexander Inglis, assistant professor of education, Harvard University; and Harold W. Foght,

specialist in rural school practice, Bureau of Education. In the latter stages of its work in the State this committee was assisted by the Commissioner of Education in person. The committee presented its report to the Washington Commission of Educational Survey on April 15, 1916. On April 27 the commission reported to the governor of the State, recommending that certain legislation bearing on the control, the support, and the functions of public educational institutions be passed by the next legislature, and submitting by way of evidence the report of the bureau's committee. Bulletin No. 26, 1916, Bureau of Education, contains both documents. The report of the commission followed, in the main, the bureau's recommendations. In a few instances it recorded a different opinion.

Limitations of space prevent the detailed discussion of these reports. A few points may be mentioned, however. Re-enunciating the principle of major and service lines laid down in the Iowa report, the committee recommends the partial redistribution of the functions of the two existing collegiate institutions. Both now maintain departments of architecture, education, engineering (chemical, civil, electrical, mechanical, mining), forestry, liberal arts, and pharmacy. The report urges the abandonment by the State college of architecture, chemical engineering, forestry, and pharmacy as major lines. It declares that only one school of mining engineering should be maintained, but suggests that its appropriate location be determined on consultation with mining experts. It recommends the sharp differentiation of the departments of education at the two institutions. In view of local factors, which are discussed at some length, it counsels the continuance of undergraduate work in civil, electrical, and mechanical engineering and in liberal arts at both institutions. It proposes that the university abandon extension work in home economics. Graduate work, except in the departments maintained by the State college alone, should be developed exclusively at the university.

Elaborate analyses of costs, of the geographical distribution of the student bodies in the different departments at the two institutions, and of the work and remuneration of the teaching staffs are used in support of the recommendations. The average cost per student at the State university was found to be \$192.77, and at the State college \$289.79. A calculation showing the cost of a student clock hour of instruction in each of the principal departments at both institutions is the chief contribution to financial statistics made by this report. Commenting on the support of the State university and the State college, the report says:

(1) Washington has not been spending as much money on its State collegiate institutions in proportion to their needs and the State's wealth as many other progressive States. Both should be more liberally supported.

(2) The State college is for the most part well housed and the pressure on its plant is not extreme. On the other hand, the salaries paid its teachers are considerably below what should be paid to competent men in institutions of this character. In the past two years the amount spent per student has been somewhat higher than the per capita outlay in other institutions which the Bureau of Education has studied. However, the committee especially calls attention to the fact that, in order to meet the needs of the State in the direction of agricultural instruction, extension and experimentation alone, this institution will require largely increased appropriations.

(3) The State university has for many years been starved. It is housed in part in buildings which are unworthy of a great university in a great and wealthy State. Its expense per student during the last two years is much lower than the similar expense in any institution of university rank which the Bureau of Education has studied. The legitimate expansion of the institution, especially the development of a school of commerce, demands large increases in its support.

Probably the most important recommendations of the section of the report dealing with public schools are, first, those calling for the raising of the professional requirements for holding the county superintendency and for the increase of the salary of this office (a salary scale ranging from \$1,200 to \$3,000 is proposed); second, those looking toward the establishment of definite professional and academic qualifications for all persons occupying teaching positions and the consequent reorganization of the State system of certifying teachers; and, third, those advising a fundamental revision of the common-school course of study, with particular reference to the varying needs of urban and rural children.

The section on normal schools proposes certain standards for a satisfactory system of teacher preparation. They are, in brief:

1. The entrance requirements to normal schools to be raised to graduation from a four-year accredited high-school course.

2. The lowest grade of certificate issued by the normal schools to be two years above high-school graduation.

3. The ultimate standard of attainment for all persons teaching in the State to be graduation from an accredited high school and at least two years of professional preparation. (The committee recommends specific steps by which this standard may be enforced.) However, the process of elimination should be gradual, to permit teachers in service to meet the new requirements without causing too great hardships.

4. The normal schools to offer differentiated courses of study two and three years in length based on high-school graduation. The certificates should eventually be given at the end of the two-year courses and the normal diploma at the end of the three-year courses.

5. The normal schools to organize a thoroughgoing extension service for the teachers in service.

6. No license to teach to be made permanent until the candidate has given evidence of progressive scholarship. The State board of education should prepare courses of study including both professional and cultural subjects for the further training of teachers in service, and within five years of the time of the receipt of a provisional certificate every candidate should be required to pass examinations in the subjects included in these courses.

The legislative steps necessary to secure these ends are then presented in some detail. This is unquestionably one of the most constructive portions of the whole report.

The law providing for the support of the five higher institutions by a millage tax, and specifying the portion of the tax to be assigned to each institution, was enacted in 1911, and was to remain operative for six years. One of the commission's tasks was to examine the present rate and distribution of the millage tax and to report to the legislature of 1917 whatever modifications might appear desirable. Indeed, this was doubtless the most important of the commission's functions. The present tax is distributed as follows:

	Mills.
State university-----	.475
State college-----	.325
Bellingham State Normal School-----	.09
Cheney State Normal School-----	.09
Ellensburg State Normal School-----	.07
Total-----	1.05

Convinced by the detailed financial statements made in the bureau's report, the commission, after long deliberation, unanimously recommended that the total tax appropriations for higher institutions should be for the immediate future 1.9 mills on every dollar of taxable property, this amount to be distributed among the institutions as follows:

	Mills.
State university-----	.90
State college-----	.55
Bellingham State Normal School-----	.18
Cheney State Normal School-----	.1425
Ellensburg State Normal School-----	.1275
Total-----	1.90

SURVEY OF THE STATE HIGHER INSTITUTIONS OF NORTH DAKOTA.

The 1915 annual report gave an account of the legislation creating the State Board of Regents of North Dakota and ordering, as a preliminary to the appointment of the commissioner of education, the new board's executive officer, an educational survey by a competent expert or experts of the nine institutions under the board's control.

In August, 1915, the board requested the Commissioner of Education to undertake this survey. After the necessary correspondence a conference in Bismarck was arranged for the first week in November. At this time the commisisoner announced that the Bureau of Education would assume responsibility for the survey, and the following commission was appointed to make the study: Dr. William T. Bawden, specialist in industrial education, Bureau of Education; Dr. Lotus D. Coffman, dean of the college of education, University of

Minnesota; and Dr. Edwin B. Craighead, former president of the University of Montana, who was added to the commission at the request of the board of regents. The Commissioner of Education was intimately associated with the work of the survey throughout its course and personally directed the preparation of the report. A preliminary report on the findings and recommendations was filed with the State board of regents in July, 1916. It covered the following topics:

1. General statement.
2. Bill creating State board of regents.
3. Laws touching public education in North Dakota.
4. The State of North Dakota.
5. Maps and statistical tables.
6. An efficient State system of education.
7. Preliminary survey.
8. The University of North Dakota.
9. The agricultural college.
10. The normal schools of North Dakota and their relation to the rural schools.
11. The industrial schools:
 - (1) The State School of Forestry at Bottineau.
 - (2) The North Dakota Academy of Science at Wahpeton.
 - (3) Normal and Industrial School at Ellendale.
12. The State library commission.
13. Rural population and the rural schools.
14. The high schools of North Dakota.
15. The classification and standardization of educational institutions.
16. Summary of recommendations.
17. Conclusions.

The document, somewhat revised, is later to be published as a bulletin of the Bureau of Education.

Among the recommendations in the report which will probably be of greatest interest to students of State education the following may be noted:

The commission recommends substantially the same differentiation of the school of education at the university and the department of education at the agricultural college as was recommended by the bureau's committee in Washington.

It counsels the assignment as major lines to the university of music, all branches of engineering to be given, except agricultural and industrial engineering, of advanced training in the liberal arts and pure sciences, and of professional work in law and medicine.

It recommends that agriculture, professional and technical training in home economics, and pharmacy be considered major lines at the agricultural college.

It declares that the work of the normal schools should, for the present, be confined to the preparation of elementary teachers with special emphasis on the rural schools. Recommendations for the

elevation of the standards of academic and professional training of teachers similar to those proposed in the Washington report are made. The establishment of a normal school in the southwest quarter of the State is also urged.

On August 1, 1916, the State board of regents appointed Dr. Craighead commissioner of education.

EDUCATIONAL AND FINANCIAL STATISTICS IN PRESIDENT'S REPORTS AND REPORTS OF SPECIAL COMMITTEES.

Allusion has been made to the growing tendency among progressive colleges and universities to survey themselves, to gather as careful a statistical record of their vital operations as possible, and to make use of these facts in deciding upon new policies. There has also been a gratifying disposition to make such facts public. Probably nothing a college can do serves better to strengthen the public confidence in the integrity and efficiency of its management.

REPORT OF THE COMMITTEE ON COSTS OF THE COLLEGE OF THE CITY OF NEW YORK.

One of the most exhaustive and valuable studies of the type just referred to is the report of the committee on costs of the College of the City of New York. This committee was appointed from the faculty of the institution in October, 1914, in response to a resolution of the board of trustees requesting a report showing comparisons of the cost per student, the salaries per grade, and the hours of instruction of the teaching staff in the College of the City of New York and in similar institutions of standing in the country.¹

THE REPORT OF THE PRESIDENT OF SMITH COLLEGE.

The annual report of the president of Smith College for the year 1914-15 contains careful statistical analyses of the conditions of work of both students and teachers, of the sources from which the student body comes, of the previous preparation of students, of the rate and causes of mortality, and of several other matters of less general concern. Three tables in particular will prove of special interest to students of college administration. The first of these summarizes the work of the 22 departments of the college. It shows by classes (freshman, sophomore, etc.) the number of students engaged in the study of each subject during both semesters and the number of student hours given by each department. The second shows the size and number of class sections and the number of hours a week that each section is given. The third indicates the geographi-

¹For a detailed description of this study, see Bull., 1916, No. 46.

cal distribution of the student body by States and foreign countries. From this table it appears that but 40 per cent of the present student body are from the New England States, 38.5 per cent come from the Central States, and 21 per cent from the Western States.

REPORT OF THE PRESIDENT, DEANS, AND OTHER OFFICERS OF MIAMI UNIVERSITY.

A previous report (see Rep. of Commis. of Educ., 1914, pp. 174 and 175) called attention to several intensive studies of important aspects of educational and financial administration made at Miami University. The report of the president, deans, and other officers of this institution for the year 1915-16 is replete with graphical and tabular records of various phases of institutional activity which thus far have been seldom analyzed. In fact, the statistical portion of this report presents what is practically a survey of the scholastic and fiscal operations of the university conducted by its own officers.

COLLEGE ENTRANCE REQUIREMENTS.

For many reasons the current status of college entrance requirements is of great significance. No radical new tendencies have manifested themselves in the year under review. There has, however, been an interesting extension of certain movements already described in previous reports.

COMPREHENSIVE EXAMINATIONS.

Undoubtedly the method of admission represented by the Harvard new plan and the Yale new or alternative plan (see Rep. of Commis. of Educ. for 1915, p. 148), including as the determining factor the "comprehensive examination,"¹ is the most original and important contribution to educational practice as affecting the relations of secondary schools and colleges since the adoption by middle western institutions of the policy of admission by certificate. The method has evidently commended itself to a large number of colleges of the North Atlantic section. The action of the College Entrance Examination Board² in voting to prepare comprehensive examination papers for the use of such colleges in its membership as admit on that basis, constituted an unreserved indorsement of the plan by the organization which is probably at once the most influ-

¹ The essential feature of the plan is that it combines the certificate and examination methods of admission. The candidate presents a certificate from the secondary school testifying to the quantity of the work covered. The college takes a sample of the quality by examining him in four subjects. The examination is designed to test the candidate's general knowledge of a given subject and his intellectual power, not to ascertain whether he has mastered a prescribed book or course.

² Referred to in the last Rept. of the Commis. of Educ., p. 149.

ential and the most conservative of all those that deal with the problem of the articulation of college and secondary school. In view of this indorsement, it is not surprising that several of the strongest institutions of the Northeast have adopted or propose to adopt the new method, with unessential modifications.

Haverford College has reported to the bureau the adoption within the past year of a plan of admission under which the candidate submits a certified school record and passes comprehensive examinations in a few subjects.

The four large certificating colleges for women in the Northeast—Mount Holyoke, Smith, Vassar, and Wellesley—have announced that they will together adopt a similar plan to replace the certificate system in September, 1919. Any candidate may enter under this plan prior to 1919 by passing the comprehensive examinations now offered by the College Entrance Examination Board and furnishing the required evidence from the secondary school attended. Considerable latitude of choice is allowed the candidate in the selection of the comprehensive examinations to be taken.

ENTRANCE REQUIREMENTS IN NEW HAMPSHIRE.

In the Report of the Commissioner of Education for 1914 (p. 163 ff.) an account was given of the objections raised by certain of the New England State departments of education to the alleged domination of high-school education in New England by the New England College Entrance Certificate Board. It was there pointed out that the entrance requirements of the constituent colleges of the board were regarded by several of the chief State school officers as too conservative, and that through the immense influence and prestige of the board this conservatism was carried over to the secondary schools oftentimes, these officers believed, to the disadvantage of their respective communities.¹ In order that the high schools of New Hampshire at least might be free to adapt their curricula to practical local needs without fear of being outlawed, the State superintendent advocated the establishment of a State university which should adapt itself to the work done by the high schools and should raise no "artificial and arbitrary obstacles in the pathway of education."

An announcement of changes in the basis of admission to New Hampshire College appears to indicate that this institution is pre-

¹ It is interesting to note in this connection that at a conference held during the Christmas recess of 1915 of representatives of the certificating boards of the country—the New England board, the North Central association, the associations of the Middle States and of the South—the conclusion was reached that in New England only is there any certificate board that has done really effective work in making a certificate practically equal to an examination. In other parts of the country the list of approved schools is merely an honor list, which the colleges follow or not, as they please. No special certificate grade is required of pupils, but a mere passing grade entitles them to a certificate.

paring to establish a cooperative relationship with the State department of public instruction similar to that which exists between the State universities and the State education departments of certain other States. The college has voted to admit any graduate from a high school or academy approved by the State department of public instruction on the basis of his graduation, without the special certificate formerly required, provided the division entrance requirements of the college have been met. In the agriculture and arts and science divisions these division requirements comprise seven prescribed and eight elective units; in the engineering division eight units are prescribed and seven are elective. The latitude thus granted to the schools in the determination of the content of the secondary curriculum for those who plan to attend the State college is considerable.

INCREASES IN THE AMOUNT OF ENTRANCE CREDITS DEMANDED.

The reaction against merely quantitative estimates of college preparation, which is represented by the spread of the new plan of admission in the Northeast, is by no means universal. In other sections emphasis continues to be placed chiefly on the amount of ground covered. Especially is this the case in those parts of the country where lax standards of admission have prevailed in the past. In these quarters it is undoubtedly wise for institutions to make sure first that candidates have undergone at least a reasonable minimum of secondary training. Closer discriminations as to the quality of the training may be set up by later enactments.

The development of public (and to some extent even of private) secondary schools has been seriously hampered in certain States by an oversupply of colleges, the majority of which depend in large measure on students' fees for support. These States have witnessed an annual scramble for recruits which has ignored the interest of the public in the establishment of sound secondary schools and has too often made a mockery of college standards. More than one State school officer has complained that it is impossible to maintain a four-year high school within 20 miles of some of the more aggressive of these needy colleges. High-school students of the third and even of the second years are lured away by the promise of collegiate rating. The resulting burden of conditions has also been found to vanish during the college course without undue effort on the part of the students thus ostensibly handicapped. So a vicious circle has been established which has prevented both the development of the public-school system and the realization of true collegiate standards.

South Carolina has been one of the States which has suffered from these conditions. The State education department lists 20 colleges for whites, 14 of which are recognized by the Bureau of Education

(the total white population of the State is less than three-quarters of a million). In 1914-15 the department recorded a total high-school enrollment of 10,481, and a total of but 673 pupils above the third high-school year. The difficulty of building up four-year high schools (but 41 schools are listed by the department as having fourth year students) has been greatly increased by the readiness of some of the colleges to accept pupils with but two or three years of high-school training. Concerted steps toward improving the situation were taken in April, 1915, when the South Carolina Association of Colleges passed resolutions providing that—

for the session of 1915-16 the colleges shall admit by certificate only those students who have completed not less than a three-year high-school course, or its equivalent.

It recommended that:

It shall be the established policy of the association to discourage students from coming from any community that maintains a four-year high-school course until they have completed the **fourth year**.

A number of other institutions in various parts of the country have reported to the Bureau of Education increases in the quantitative requirements for admission. Thus, for example, H. Sophie Newcomb Memorial College, Maryland State College, Oregon Agricultural College, and Washington and Lee University have raised their entrance requirements to 15 units. Baldwin-Wallace College has increased its requirements for conditioned entrance from 12 to 13 units, and the requirements for full standing from 14 to 15 units. The University of Oklahoma, which requires 15 units for full standing, has raised its requirements for conditioned entrance from 12 to 14 units. The College of Industrial Arts, at Denton, Tex., has raised its regular requirements to 14 units.

A STUDY OF PENSIONS AND INSURANCE FOR COLLEGE TEACHERS.

Special reports of the Carnegie Foundation for the Advancement of Teaching generally command the thoughtful attention of those who have to do with higher education in the United States. Bulletin No. 9, 1916, of the foundation, "A Comprehensive Plan of Insurance and Annuities for College Teachers," by Henry S. Pritchett, president of the Carnegie foundation, is a noteworthy contribution to the literature of a subject in which as yet few scientific studies have been made. The conclusions reached on a matter of vital interest to all college teachers are likely to be regarded both by boards of trustees and by college faculties as of the highest importance. The preliminary statement points out that the report describes a plan of relief which it is believed will protect the teacher against the life hazards incident to his calling, which is secure and

permanent, which is within the reach of the teacher and of his college, and which takes into account not only the interests of the teacher, but those of his employer and also those of the general public.

The conclusion of the report is—

that a contributory system in which both teacher and college join, and which is so constructed that it will not restrict migration from one college to another, is the only system of retiring annuities which is at once socially wise, economically sound, and permanently secure.

This conclusion has been reached by the officers of the Carnegie Foundation after 10 years of experience with a different system and after exhaustive study of an exceedingly complicated subject. The foundation has a large fund to administer for the payment of pensions to college teachers. The fund is to be used for no other purpose. The directors of the foundation decided in the beginning to spend the income of the fund for the payment of noncontributory pensions in a limited number of colleges and universities,¹ reserving the privilege of modifying the system from time to time as experience might dictate. The rapidly increasing load upon the foundation's income (due in part to the fact that the mortality experience of the foundation during the 10 years of its existence has been far below the most conservative tables and the cost correspondingly greater) points to the likelihood of the still further limitation of the field of its contributions in the future, unless some other plan of administration is adopted.

The report was originally presented as a confidential report to the trustees of the foundation. The board has not yet acted upon the proposals, except to pass resolutions ordering the circulation of the report among the associated colleges and announcing "that whatever plan is finally adopted will be devised with scrupulous regard to the privileges and expectations which have been created under existing rules."

TRAINING FOR PUBLIC SERVICE.

Efforts of university administrators during the past two decades have been directed as never before toward the establishment of contacts between the university and the community which it serves. To the observer who views American higher education as a whole, this endeavor to make the university in the broadest sense an instrument for public service will doubtless appear the most conspicuous present tendency.

A manifestation of this tendency, pregnant with possibilities for the development of great governmental efficiency, is reported in the

¹ Seventy-three colleges and universities in the United States and Canada are now associated with the Foundation.

recent projects for the establishment of courses for the training of public servants, which have been inaugurated by institutions in a number of the larger cities and by several State universities in the Middle West and Southwest. These projects have been promoted and fostered, first, by the committee on practical training for public service of the American Political Science Association; then by a national conference on universities and public service held in New York in May, 1914; and latterly by the Society for the Promotion of Training for Public Service, an organization created to cooperate with universities and governmental agencies in the formulation of plans and the circulation of propaganda looking to this end. The relation of this movement to certain of the purposes of the Association of Urban Universities (mentioned in the report of the commissioner for the year 1915, page 154) will be apparent.

The character and scope of the training contemplated are indicated by the recommendations of two institutional committees reporting during the academic year just ended. Cooperation, not only with Governmental agencies in the actual work of administration, but with other educational organizations, is included in both plans. A special committee on training for public service, appointed by President Butler, of Columbia University, recommended the following program for training for unofficial public service and such higher nontechnical administrative positions as are now open in official service:

1. Two or three years of regular college training, including elementary government, economics, etc.

2. One year of special training embracing the following subjects: (*a*) Municipal government (specialized course); (*b*) Administrative law; (*c*) Public and municipal accounting; (*d*) Office and works management; (*e*) Public finance and budget making; (*f*) Institutions of public welfare; (*g*) City planning and social surveys; (*h*) Technique of investigation and inquiry; (*i*) Statistics and reporting, including instruction in English and graphic methods of presentation.

3. One year of contact or field work and observation. This work should be done (under the direction of the standing committee on training for public service hereinafter described) in New York City departments or in cooperation with the Bureau of Municipal Research and Training School for Public Service in such a manner that each student may secure practical experience in—

- (*a*) Budget making; (*b*) the investigation of several branches of public administration; (*c*) the preparation of reports and recommendation on the basis of ascertained results; (*d*) the practice of presenting oral statements of results in short form.

A committee on municipal service survey, appointed by President Mezes, of the College of the City of New York, recommended:

- (1) That there be appointed at the college a director of public service training. It shall be the duty of this officer to keep a record of all municipal positions which are open to college students and the subjects and dates of approaching examinations. He shall also establish at the college in cooperation with

the municipal civil-service commission an intelligence office or clearing house for civil-service positions, and he shall be prepared to advise students as to the courses and methods to be pursued in preparation for such positions. He shall confer with the civil-service commissioners and chief examiners as to the relation between college instruction and civil service as to examinations, standards, credit for field work, and eligibility. The director of public service training shall also confer with the heads of city departments and bureaus with regard to their needs and the ability of the college to supply them.

(2) That a college standing committee on public service training be appointed to cooperate and advise with the director. Such a committee should have among its membership representatives of the departments most concerned in the technical training of those who will enter public service.

(3) That the announcements of the several divisions of the college contain a statement of the scope and work of the committee on public service training.

(4) That provision be made for cooperation of the college with such unofficial public agencies as the training school for public service and the Bureau of Municipal Research, especially with a view to the possibility of exchange of students, exchange of instructors, and exchange of credit.

(5) That the special courses to be recommended and their formal organization be immediately taken up by the director of public service training with his committee and all other departments and agencies involved.

THE PROPOSAL FOR A STATE UNIVERSITY IN MASSACHUSETTS.

It is a well-known fact that the older Commonwealths of the East have less generally provided higher education at State expense (except in agriculture and mechanic arts, for the partial maintenance of which Federal appropriations are also made) than have the Western and Southern States.

Recently certain persons in several of the Eastern States have urged the creation of State universities as the logical culmination of the State's educational enterprise, and as the only sure means of providing equal educational opportunities for all citizens. One of these proposals has already been alluded to (see p. 131). A second, perhaps of even greater interest, concerns the foundation of a State university in Massachusetts.

Without reference to the rank and reputation of the privately endowed institutions of Massachusetts, a mere statistical summary of their number, enrollments, and financial resources indicates that this State is singularly well equipped with facilities for higher training. In spite of this fact, however, the State board of education was instructed to prepare for submission to the legislature of 1915 a plan for the establishment of a State university. Under these instructions the board was allowed no discretion. It consequently submitted forms for two acts which might be made the basis of legislation. The first provided for an initial appropriation of \$500,000, for the purpose of acquiring grounds and buildings and organizing a teaching institution. The second provided for the annual appropriation of a scholarship fund of \$100,000, to be administered by the

board and to be used in paying the tuition of worthy young people at existing institutions.

The board also suggested—

that as an alternative to a State university established as an institution offering regular courses of instruction the Commonwealth might create and maintain a university of Massachusetts as a nonteaching organization, which should consist of a board of trustees authorized to conduct university extension courses and correspondence courses, to administer a system of State scholarships, to promote the training of secondary school teachers and of school administrators and supervisors, to provide for organized cooperation between higher institutions of learning in Massachusetts on the one hand and the State and municipal departments on the other, and to secure proper articulation of high school and college by organizing and putting into effect plans whereby the above results may be secured through cooperation with existing colleges and universities.

Such a university should, at least at the outset, maintain no faculty. It should be provided with buildings and equipment necessary for the proper conduct of its administrative work. If circumstances warranted, it might in time be authorized to organize and maintain a permanent staff of lecturers for subjects or courses not otherwise available. It is believed that the institutions of higher education in Massachusetts would cooperate with such a university, and it has been stated that there would be readiness to support, without expense to the State, a certain number of extension courses.

The committee of the legislature to which the matter was referred reported that no legislation was necessary. The legislature, however, passed a very important measure which looks in the general direction of the board's proposals. This provided for the establishment of a department of university extension under the direction and control of the board of education and appropriated \$25,000 for its maintenance during the year 1915.

ACADEMIC FREEDOM.

The issues implicit in the question of academic freedom transcend in importance all others. They concern not only the extent of the legitimate powers of boards of trustees; they concern the integrity of universities and the integrity of the scholar's calling; they involve, ultimately, the whole principle of progress in the social order.

The recent series of instances of alleged breaches of academic freedom, which have almost the appearance of an epidemic, deserve extended discussion in the commissioner's report. Such discussion was begun last year. (See Rep. of Commis. of Educ., 1915, pp. 157 et seq.) Some of the wider implications of the question of academic freedom were then mentioned. The reports of several committees appointed by various associations of scholars to investigate cases of disciplinary action visited by boards of trustees on professors accused of expressing unpopular opinions were summarized. The formation of the American Association of University Professors, and its inevitable preoccupation with this matter, were noted.

During the year under review a number of reports dealing with other cases of alleged breaches of academic freedom have emanated from this association. The most significant document published by the association is the report of the general committee of 15 (mentioned in the commissioner's report, 1915, p. 161) on academic freedom and academic tenure, submitted to the association at its second annual meeting in December, 1915. Both the representative and responsible character of the association which issues it, and the eminence of the men whose signatures are attached, would bespeak for the report in any event the careful consideration of university boards and executives. Its content, moreover, is worthy of its authors and its sponsor. It constitutes one of the most valuable contributions of the year to the discussion of educational policy. The pamphlet has already been widely distributed by the Bureau of Education among those concerned with the direction of higher education and only brief mention can be given to it here.

REPORT OF THE COMMITTEE.

The report is divided into two parts, the first a general declaration of principles which it is hoped will promote a clearer understanding of the issues, and the second a group of practical proposals designed at the same time to safeguard academic freedom and to protect university executives and governing boards from unjust charges of its infringement.

It is pointed out in Part I that academic freedom, in so far as it concerns the teacher, comprises three elements: Freedom of research, freedom of teaching within the institution, and freedom of extra-mural utterance and action.

The report distinguishes between two radically different types of institutions, the relatively rare proprietary schools designed for the propagation of specific doctrines, religious or economic, and the ordinary college or university not strictly bound to a propagandist duty.

The nature of the trust reposed in the governing boards of what the report significantly calls "untrammelled institutions of learning" is emphatically declared to be public. Whether the institution be a State institution or a privately endowed institution appealing to the general public for support and patronage, "the trustees are trustees for the public. * * * They can not be permitted to assume the proprietary attitude and privilege * * * [they] have no moral right to bind the reason or the conscience of any professor." "This elementary distinction between a private and a public trust is not yet so universally accepted as it should be in our American institutions," but it is essential that it be recognized by governing boards.

The preservation of the dignity and independence of the professorate is necessary not only to bring into the profession men of high gifts and character, but also to insure the honest performance of their function of dealing with knowledge at first hand and reporting the results without fear or favor.

In discussing the relationship between university trustees and members of university faculties the committee makes what is probably the most important pronouncement of the whole report:

The latter are the appointees, but not in any sense the employees, of the former. For, once appointed, the scholar has professional functions to perform in which the appointing authorities have neither competency nor moral right to intervene. * * * So far as the university teacher's independence of thought and utterance is concerned, though not in other regards, the relationship of professor to trustees may be compared to that between judges of the Federal courts and the Executive who appoints them. University teachers should be understood to be, with respect to the conclusions reached and expressed by them, no more subject to the control of the trustees than are judges subject to the control of the President with respect to their decisions.

It is pointed out that in the earlier days of American universities the chief menace to academic freedom was ecclesiastical, and that philosophy and the natural sciences were the subjects chiefly affected, but that now the danger zone has been shifted to the social sciences.

The one [danger] which is the more likely to affect the privately endowed colleges and universities is the danger of restrictions upon the expression of opinions which point toward extensive social innovations, or call in question the moral legitimacy or social expediency of economic conditions or commercial practices in which large vested interests are involved.

Although the fact is not generally recognized, "the existence in a democracy of an overwhelming and concentrated public opinion" may also constitute a serious obstacle to the real liberty of the individual.

An inviolable refuge from such tyranny should be found in the university. It should be an intellectual experiment station, where new ideas may germinate and where their fruit, though still distasteful to the community as a whole, may be allowed to ripen until finally, perchance, it may become a part of the accepted intellectual food of the Nation or of the world.

It is not, however, the purpose of the report to imply that the university teacher is to be subject to no restraints whatever.

The liberty of the scholar within the university to set forth his conclusions, be they what they may, is conditioned by their being conclusions gained by the scholar's method and held in a scholar's spirit; that is to say, they must be the fruits of competent and patient and sincere inquiry, and they should be set forth with dignity, courtesy, and temperateness of language.

Part II of the report proposes four measures to be adopted by universities with a view to preserving academic freedom, protecting governing boards themselves, and bringing into the academic pro-

fession men of ability and strong personality. They are, reduced to lowest terms:

1. Action by faculty committees on reappointments.
2. Definition of tenure of office, in order that there may be at every institution "an unequivocal understanding as to the term of appointment; and the tenure of professorships and associate professorships, and all positions above the grade of instructor after 10 years of service, should be permanent (subject to provisions hereinafter given for removal upon charges)."
3. Formulation of grounds for dismissal.
4. Judicial hearings before dismissal. "Every university or college teacher should be entitled, before dismissal or demotion, to have the charges against him stated in writing in specific terms, and to have a fair trial on those charges before a special or permanent judicial committee chosen by the faculty senate or council, or by the faculty at large."

This important report was signed by 13 of the committee of 15 (2 having resigned during the progress of the committee's deliberations).

REPORTS OF SPECIAL COMMITTEES OF INQUIRY OF THE AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS.

Special committees to investigate alleged infringements of academic freedom at the University of Utah, the University of Montana, the University of Colorado, and the University of Pennsylvania were appointed during the first year of the association's existence. The report on conditions at the University of Utah was published in July, 1915, and was discussed in the preceding issue of this document (see Rep. of Commis. of Educ., 1915, pp. 161 et seq.). At the meeting of the association in December, 1915, the reports of the committees on the incidents at the Universities of Colorado and Pennsylvania were submitted, together with a summary report of the general committee on academic freedom and academic tenure on the case of Prof. Willard C. Fisher, of Wesleyan University, a case referred to the general committee by an earlier committee of nine from the American Economic Association, the American Political Science Association, and the American Sociological Society. (See Rep. of Commis. of Educ., 1915, pp. 160 et seq.) All three of these reports have since been published by the association.¹ The capacity of the association to deal with matters affecting the welfare of its own members in a judicial manner, with restraint and with perfect fairness toward all concerned, is conspicuously demonstrated in these documents. Moreover, its findings and suggestions apparently have already helped to bring about at two institutions radical revisions of the regulations relating to professorial tenure.

¹ The committee of inquiry on the Montana case was not ready to report at the December meeting. It was authorized to lay its report when finished before the association in print.

THE NEARING CASE.

Probably no other case of the alleged infringement of academic freedom has attracted such widespread interest and has given rise to such prolonged and heated controversy in the public prints as has the case of Prof. Scott Nearing, whose appointment as assistant professor of economics at the University of Pennsylvania was, contrary to all expectation and precedent, not renewed in the spring of 1915. The facts, as far as they were then obtainable, were stated in the commissioner's report for 1915 (pp. 165 et seq.). The commonly assumed cause of Dr. Nearing's virtual dismissal and the attitude of various members of the university board of trustees and of groups of alumni toward the questions at issue were also indicated. The very brief summary of the findings of the committee of inquiry of the American Association of University Professors therefore is sufficient to complete for the purposes of these reports the record of this incident. This summary follows:

As to the procedure followed by the board of trustees in its action with reference to this member of the university faculty the following facts are established:

1. The position held by Dr. Nearing was one carrying a definite presumption of reappointment in case of satisfactory service.

2. It was duly made known to the board of trustees by the department of economics and by the dean of the Wharton School that Dr. Nearing's service was regarded as satisfactory, and he was expressly recommended for reappointment. The board was also informed by the dean that this recommendation had the substantial support of the Wharton School faculty.

3. This recommendation of the qualified representatives of the educational staff of the Wharton School was rejected by the board of trustees on June 14 without further consultation with those representatives, without reference of the case for judicial inquiry to any faculty committee, and (originally) without assignment of reason.

4. The board's own action on June 14 was not judicial in character. No opportunity for a hearing upon the charges or criticisms made against him was afforded Dr. Nearing; nor did the board conduct any inquiry on its own account to ascertain whether the persons outside the university, by whose criticisms the board declares its action to have been determined, had been correctly informed as to Dr. Nearing's utterances or had correctly understood them, or whether their criticisms were, in fact, justified by the authentic language of the utterances in question.

The committee is accordingly compelled to conclude that at least a contributory cause of Dr. Nearing's removal was the opposition of certain persons outside the university to the views, upon questions within his own field of study, expressed by him in his extra-mural addresses.

It says:

Removal or refusal of appointment wholly or partly upon such a ground, without judicial inquiry by any committee of fellow-economists or other scholars, the committee can only regard as an infringement of academic freedom.

THE NEW STATUTES OF THE UNIVERSITY OF PENNSYLVANIA.

This incident, otherwise regrettable, has apparently led the trustees of the University of Pennsylvania to alter the regulations previously in force with regard to the tenure of teaching positions and the procedure in the dismissal of professors. Indeed, evidence is not wanting that the activities of the Association of University Professors may have had influence in the decision of the board to take this step. Although the new regulations do not coincide with the association's "Practical proposals" (see p. 134)—in fact were adopted before the association's committee made its report—nevertheless, they represent a conscientious effort to attain substantially the same ends.

CHAPTER IX.

VOCATIONAL EDUCATION.

By WILLIAM T. BAWDEN,
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1. SUMMARY OF SALIENT FEATURES OF PROGRESS NOTED.

A review of vocational education for the year is afforded by the following condensed summary of the most significant features which have been noted as indicating the directions in which progress is taking place: (1) In place of the conception of vocational education as a comparatively simple matter, which prevailed a few years ago, there is an evident tendency to see in it a very complex problem, for the solution of which there must be much patient investigation and the cordial cooperation of all possible educational and social agencies. (2) There appears to be a growing recognition of the fact that vocational education will not of itself solve all the problems of life or of vocation, but that it must take its place as an essential part of a complete plan of education that provides for all legitimate interests and activities of the individual. (3) There has been almost unprecedented interest in the proposed Federal aid for vocational education; it is doubtful if any other educational bill before Congress ever attracted an equal amount of popular attention. (4) The serious objections urged against vocational education have been stated in somewhat more definite and tangible form and the answers to these objections suggested. (5) There has been noticeably less interest in the unit-versus-dual-control controversy, the preponderance of opinion appearing to be against the organization of special independent boards for the control of vocational education. (6) In the States which have organized departments for the promotion of vocational education on a State-wide basis the greatest progress noted during the year appears to have been in the development of the day continuation school for young employed workers. (7) Recognition of the importance of proper machinery for insuring a supply of adequately trained teachers, including an effective plan of certification, is gradually making itself felt, though much ground still

remains to be traversed. (8) The emphasis on language work in vocational schools, and the high grade of results of such work as exhibited in numerous school papers and magazines written, edited, and printed by students, afford ample evidence that the cultural possibilities of vocational education are not being neglected and that the necessity of a thorough grounding in the fundamentals of education is clearly recognized. (9) In the vocational guidance field the important progress of the year has been a further development of interest on the part of the public school and the resulting beginnings of modification of school methods and courses of study. (10) In convention deliberations and in magazine articles there has been increasing emphasis on the significance of art in industry and the great importance of more adequate attention to this matter in all plans for education. (11) Within the past year or two there have been several notable instances of the employment of a trained director, with instructions to make a careful study of conditions before buildings or courses of study are planned—in contrast with which has been a rather common practice in other types of school in the past, namely, to erect and equip the building and then seek a principal. (12) The extension of the survey idea to the field of State-wide investigations, in which the Bureau of Education has done pioneer work, has for the first time been applied to a State-wide vocational education survey in Indiana, where a study has been inaugurated by a group of agencies working in cooperation. (13) There has been much discussion, as well as actual development, in the field of so-called prevocational education. (14) There has been a noticeable development of new types of work in the manual-training shops in the effort to meet the demand for courses that shall be more practical and that shall have more real value in preparing the way for specific industrial education. (15) There has been a noticeable tendency in the direction of a more sympathetic and sane appraisal of the values of the manual arts in the public school on the part of the partisans of so-called real vocational education.

2. CONSERVATIVE OBJECTIONS EXAMINED.

During the past year educational conservatives have expressed themselves on a number of occasions with reference to certain anticipated serious shortcomings of the vocational education program. The warnings of those who foresee difficulties in the forward progress of a movement that gives promise of being so widespread and thoroughgoing are not to be treated lightly, but should receive attention appropriate to the gravity of the situation and the importance of the sources.

Analysis of the serious objections that have been urged against vocational education shows that most of them belong to one of the following classes:

1. *Control*.—Some of the friendly as well as unfriendly critics of vocational education fear lest it fall under the control of sinister or selfish interests. To these critics it seems easy to see that prospective employers of other people's talents and abilities will reap some advantage from a general increase in the quantity and quality of ability for hire; but the possibility of advantage to those whose talents are developed seems difficult of comprehension.

The best-known correctives of control by or for selfish interests are publicity and popular understanding of the situation. Since both of these correctives show a healthy growth during the past few years, it may be confidently expected that the danger, if it exists, will be appreciated in due time and appropriately dealt with.

It seems even more certain now than it did a year ago that the popular demand will be irresistible that vocational education be developed in connection with, and as a part of, the public-school system. Without question the cooperation of other agencies will be sought and utilized, but it appears to be generally accepted that the logical scheme of administration centers in a single board of public-school trustees the responsibility for all forms of education supported by public taxation. If, therefore, vocational education be developed as an integral part of the public-school system, and if boards of education continue to be reasonably responsive to public opinion, there seems to be good ground for assuming that vocational education will prove to be as able as any other department of public education to withstand the pressure of interests that are inimical to the public good. It is extremely important that public-school authorities prepare themselves for the new responsibilities that now seem imminent, by thorough study of all the factors involved in vocational education.

2. *Narrowness of aim*.—A second form of objection arises from the belief that the vocational education program is determined by an incomplete vision of the real meaning of education, and that it sets up aims that are indefensibly narrow. Basing their judgment on the performance of certain private institutions conducted primarily for gain, critics of this type appear to conceive that to train a boy or girl in the operation of some factory machine or process by means of a brief intensive course is regarded and accepted as vocational education. To this view the one sufficient reply is that it is wholly mistaken. There is no evidence that this is the view held by the framers of any of the legislation thus far enacted. On the contrary, emphasis is quite generally placed, in the laws themselves,

on the "supplementary instruction necessary to build a well-rounded course of training."

Furthermore, the experience of the States which have undertaken to deal specifically with this problem demonstrates that this narrow conception of vocational education is not the one which will prevail in this country. It may be possible to find imperfections in administrative machinery and defects in method of instruction, all of which are being constantly and earnestly studied with the object of their elimination, but it is not believed that the leaders of the vocational education movement can be justly charged with seeking anything less than the highest interests of young people and the social whole.

3. *Prescription of future careers.*—There are those who proclaim the dangers involved in vocational education because of its supposed tendency to prescribe or fix the future careers of boys and girls on the level of the training given, which is assumed to be "lower," or in some way less desirable, than that of traditional education. One prominent spokesman for this group publicly charges vocational education with being a deliberate attempt to determine arbitrarily the life occupations of boys and girls, and to divert them at a tender age into careers which hold no promise for the future.

As Dr. Snedden has ably pointed out, this is a baseless charge. There is no issue with regard to vocational education under 14 years of age, since there is "little or no serious discussion of vocational education, as direct and purposive preparation for a specific calling, which now contemplates any claim upon the years required in most States to be given to compulsory school attendance, namely from 6 to 14 years of age."¹ Neither has there been offered any serious proposal to curtail existing opportunities for advanced education and culture. The point that appears to be overlooked in this criticism is that, regardless of where the responsibility lies, there are thousands of young people who are not receiving the advantages of education or training of any kind. Even if the traditional high school and college facilities were immediately doubled, many of these young persons would grow to maturity without adequate education, because, for a variety of reasons, they do not or will not go to the high schools and colleges that are available.

The new point of view represents, in part at least, a sincere attempt to serve the thousands of persons who are not being helped by existing schools, because they are not in them. It is merely begging the question to assert that the proposed schools or courses will tend to prescribe the careers of those who are attracted by them, and that the students will thereby be deprived of all prospects of future ad-

¹ Editorial, *Educational Administration and Supervision*, Dec., 1915, p. 679.

vancement. Vocational education of less than college grade has not been sufficiently tried out in many places to justify the claim that it can not succeed where other efforts have failed. It may be pointed out very appropriately, on the contrary, that in places where the experiment has been made the results to date are highly satisfactory to all concerned.

4. *Difficulty of adaptation.*—Another objection is based on the alleged difficulty, if not impossibility, of adapting specific vocational education to the rapidly changing conditions of commerce and industry. It is held that it is useless to attempt to train boys to become efficient workmen in the machine industry, for example, as it is to-day, for by next year the methods and processes which they have mastered may have become obsolete, and their "jobs" may have vanished.

Against this objection it may be effectually urged that: (a) Any specific training for a useful occupation which may be received, or any marketable skill which may be acquired, constitutes a positive asset for the individual, and is to be regarded as immeasurably valuable in comparison with the equipment of the individual who has no definite training or skill. Further, the very fact of having mastered the technic of one occupation, even though that becomes obsolete, gives one the confidence to struggle with the demands of a new calling if perchance that becomes necessary. (b) As already indicated, before the problem of vocational education can be considered solved, so far as the fields of commerce and industry are concerned, a way must be found to do something more than fit the individual for a particular "job," and this the program definitely aims to do. It can not be legitimately asserted that public vocational education anywhere is neglecting or minimizing the importance of this difficulty, or is manifesting a disposition to be satisfied with anything less than its resolution. (c) The possibility of some adjustment on the part of industry itself must be assumed. It is inconceivable that society will permanently and complacently accept working conditions that demand the sacrifice of human values in the interest of so-called efficiency. It is the duty, therefore, of vocational education to study conditions and demands as they are, and to arouse popular interest in their improvement wherever possible. (d) To advocate a halt in the progress of vocational education on the ground that the way is beset with difficulties is not becoming to those who would elevate education to the status of a profession.

5. *Expense.*—Finally, the development of vocational education as a public responsibility has been opposed on the ground that it is expensive, and that, therefore, it is a matter to be left to the individual workers or to the employers, who are to profit by it.

Vocational education of less than college grade *is* expensive, but so is vocational education of college or university grade. Ignorance is more expensive than either. It costs the public far more to educate a surgeon or a lawyer or an engineer than it does to educate a young person for one of the industrial or commercial pursuits contemplated, and yet there is no great outcry against medical or legal or engineering education because it is expensive. It is coming to be more and more recognized that money devoted to education is an investment rather than an expense.

3. NATIONAL AID FOR VOCATIONAL EDUCATION.

The bill proposing Federal aid for vocational education, drafted in accordance with the recommendations of the Commission on National Aid to Vocational Education (House bill No. 16952, known as the Smith-Hughes bill), which was introduced in the second session of the Sixty-third Congress, passed the Senate on July 31, 1916, without a dissenting vote.

A summary of the provisions of the bill was given in the 1914 report.¹

VOCATIONAL EDUCATION IN THE ARMY.

An event of much significance to education was the passage by Congress on May 19, 1916, of the Army bill, carrying an amendment which provides that soldiers in service shall be given an opportunity for vocational education preparatory to return to civil life. The amendment reads:

In addition to military training soldiers while in the active service shall hereafter be given the opportunity to study and receive instruction upon educational lines of such character as to increase their military efficiency and enable them to return to civil life better equipped for industrial, commercial, and general business occupations. Civilian teachers may be employed to aid the Army officers in giving such instruction, and part of this instruction may consist of vocational education either in agriculture or the mechanic arts. The Secretary of War, with the approval of the President, shall prescribe rules and regulations for conducting the instruction therein provided for, and the Secretary of War shall have the power at all times to suspend, increase, or decrease the amount of such instruction offered as may, in his judgment, be consistent with the requirements of military instruction and service of the soldiers.

Representatives of the National Society for the Promotion of Industrial Education assisted in the preparation of the outline of a plan for the organization of a commission, which, it is suggested, should make a careful study of vocational education in the Army and draft a report on the subject.

¹ See Educ. Rep., 1914, Vol. I, p. 239.

4. STATE SYSTEMS OF VOCATIONAL EDUCATION.

There has been much activity during the year that does not lend itself to tabular representation, or to description in impressive terms. Nevertheless material progress has been made. In those States having systems for organizing and supervising vocational schools and for assisting local communities in the maintenance of such schools through grants of State aid, the most notable advance during the year has been in the development and perfection of the part-time day continuation school for employed boys and girls of 14 to 16 or 17 years of age. The provisions of the laws under which these schools operate have been discussed in previous reports.¹

MASSACHUSETTS.

Legislation.—No new legislation reported.

Bulletins.—The seventy-ninth annual report of the State board of education, 1914-15, contains details of the progress made in vocational education.

The following bulletins were issued during 1915-16:

Booklet No. 2. Compulsory Continuation Schools: The Massachusetts Plan.

No. 5. State-Aided Vocational Agricultural Education in 1915.

No. 6. Continuation Schools in Massachusetts.

No. 7. Training of Vocational Teachers. Current Conditions in Industrial Schools.

No. 8. Statistics Regarding State-Aided Vocational Education for 1914-15.

Continuation schools.—The objects in view in the organization of continuation schools are: (1) To make a vital appeal to boys and girls of 14 to 16 years of age who are employed, and to offer them the opportunity to continue their general education and to improve their social and economic status; (2) to help these young people to get the most out of their employment; to prevent drifting in industry; to save time lost through unemployment; (3) to reduce the number of misfits by assisting to more intelligent choices of occupations, and by assisting the process of promotion from unskilled to skilled trades; (4) to establish cooperative relations between schools and employers.

Experience with these schools appears to justify the expectations that were entertained when they were inaugurated. The general-improvement instruction has yielded valuable results, and the work in vocational guidance has been found practical and serviceable. In increased knowledge of industrial conditions and in the possession of greater industrial intelligence the pupils enrolled give ample evidence of the value of the continuation-school work.

The pupils for whom these schools are maintained may be conveniently classified into three groups, according to their major needs: (1) Those who want more general education; (2) those who want to choose an occupation; (3) those who want training in occupations already chosen. Special classes are organized for these groups.

The latest report shows that in 1914-15 there were in Massachusetts 77 State-aided vocational schools in 39 cities and towns, representing an increase from 47 schools in 36 cities and towns reported the preceding year. The total cost to the municipalities and to the State for these schools was \$689,870.66. This sum includes \$17,115.57 for the expense of administration of the State office. The amount of reimbursement by the State to the cities and towns, on the basis

¹ See Educ. Rep., 1915, Vol. I, p. 224 f.; 1914, Vol. I, p. 253 f.

of one-half the net maintenance expense, or two-thirds the salaries of instructors less one-half the tuition claims, was \$217,914.99. There were 18,322 persons enrolled in State-aided vocational schools and 10,660 in other vocational schools in the State; total, 28,982. The estimated number of student hours of instruction for the year was 5,625,369.

NEW YORK.

Legislation.—No new legislation.

Bulletins.—The following bulletins have been issued:

No. 612. Vocational Training of Girls in the State of New York.

No. 621. Safety First for Vocational Schools.

No. 622. Citizenship Syllabus.

No. 624. Agricultural Education in Secondary Schools.

No. 625. The Manual Arts in New York State.

The Rochester Plan of Immigrant Education.

Training of teachers.—A special institute for the preparation of teachers to teach English to foreigners was held in Albany, for the benefit of teachers in the capital district.

The State specialists in agricultural education, with the cooperation of the State College of Agriculture, held during the summer a conference of teachers of agriculture at the State college at Ithaca. Teachers from all the State-aided vocational schools of agriculture attended.

The State is divided into districts, and a series of conferences are held each year for teachers in vocational schools and for teachers of drawing.

New York City.—The mayor has appointed an industrial survey committee, and L. A. Wilson of this department has been chosen as director of the survey. An appropriation of \$15,000 was made to cover the work, which will probably include an analysis of two trades, possibly printing and machine work.

Special problem.—The greatest special problem is how to give expression to vocational education in small communities. There are two types of such communities: First, the small agricultural; and, second, the small industrial.¹

A second problem is that of finding suitable vocational instruction applicable to small industrial communities. These communities have vocational needs as great in importance as those of the larger communities, and there is just as much need of an up-to-date school system in them as in larger cities, but they can not afford to spend more than from \$1,500 to \$2,500 for industrial equipment; they can not afford to engage at the most more than one man and an assistant to teach the subject, and these men must not only give vocational instruction, but also give the necessary manual-arts instruction in the elementary and secondary schools. If the pupils in these communities are to have a fair chance at vocational guidance and training, they must receive instruction in woodwork, ironwork, sheet-metal work, electrical work, and concrete. The work which the State has been doing in these smaller communities has been the most interesting phase of all State-aided vocational work and at the same time the most difficult.

PENNSYLVANIA.

Special problems.—The Pennsylvania State department of public instruction has been confronted with the problem of assisting the schools in the adjustment to the new demands resulting from the operation of the Cox Child Labor Act, passed in 1915. Employed minors between the ages of 14 and 16 years are

¹ For the agricultural work, see Ch. XIV, Agricultural Education.

required to attend continuation schools, where established, eight hours per week. Many city school systems had already made up their budgets for the year before the law was passed and made the necessary readjustments only with great difficulty.

Notwithstanding these difficulties, 98 districts organized continuation schools between January 1 and June 26, 1916, employing 350 teachers, and enrolling over 24,000 pupils.

Training of teachers.—The demand for teachers for the continuation schools made necessary the establishment of special summer schools in 1915. Five such schools were maintained, enrolling 311 prospective teachers, as follows: Philadelphia, 82; Reading, 59; Pittsburgh, 55; Scranton, 102; Altoona, 13.

The board of education in Philadelphia organized Saturday classes for teachers of shopwork in elementary schools. These classes were conducted for the purpose of giving such instructors experience in the woodworking trades. The course is two years in length and includes the following subjects: First year—School shop management, English, drawing, shop mathematics, wood finishing; second year—teaching methods, vocational education, short technical courses in bricklaying, cement and concrete work, plastering, and electrical wiring.

Outlines for the guidance of teachers in the summer schools and in the continuation schools have been prepared in the following subjects: English, civics, industrial geography, hygiene for the worker, industrial arithmetic, industrial drawing, pedagogy. For the special use of students in evening schools for minors, lesson outlines were prepared in elementary arithmetic, advanced arithmetic, and electricity.

Surveys.—Brief surveys have been made in a number of communities to assist in determining the types of vocational education needed, kind of equipment, cost of establishing and maintaining a vocational school or department, and to determine how many young people would be affected by the operation of the child labor law. The cities studied include: McKeesport, Homestead, Chester, Warren, Wilkes-Barre, Harrisburg, Royersford, Pottstown, and others.

Conferences.—The State has been divided into six districts for the purpose of holding district conferences of special teachers and directors of vocational subjects, manual training, home economics, music, and drawing. The conferences are well attended and of great assistance in developing the work in the special subjects. The number of these conferences held during the year was 12, as follows: In Pittsburgh, 2; in Philadelphia, 2; and 1 each in Scranton, Wilkes-Barre, Reading, Harrisburg, Warren, Ridgway, Williamsport, Bellefonte.

Types of school.—The types of school organized include the day continuation school for pupils 14 to 16 years of age, evening schools, day industrial schools or departments, and household arts schools.

During the year State aid has been given to 32 household arts schools and 35 industrial schools or departments, in 38 school districts, in 24 counties. Over 16,000 students were enrolled in these schools.

State aid is not given to classes or courses in the manual arts and the household arts, though the department is charged with the supervision of these lines of work. Incomplete reports indicate that there are 63 districts in which manual training is taught in the elementary schools, and 75 districts in which it is taught in the high schools, for which there are required 223 special teachers of manual training, exclusive of the cities of Philadelphia and Pittsburgh. Home economics, including cooking and sewing, is taught in the elementary schools in 64 districts, and in the high schools in 71 districts, for which there are required 220 special teachers, exclusive of the cities of Philadelphia and Pittsburgh.

Bulletins.—The following bulletins have been issued:

The Pennsylvania Child Labor Act and Continuation Schools.

A Digest of the Decisions of the Attorney General and Directions for the Issuance of Employment Certificates.

The department has also issued supplies of the six different forms required for the administration of the Cox Child Labor Act.

WISCONSIN.

Legislation.—No new legislation.

Bulletins.—Three bulletins have been published, Nos. 12, 13, 14, containing reports of papers and discussions at 24 district conferences of teachers and directors of industrial and continuation schools held during the year in various parts of the State.

Trade agreements.—Wisconsin has an apprenticeship law under which trade agreements have been worked out to meet the terms of the apprenticeship contract. (See Bulletin 14, pp. 67-70.)

Continuation schools.—Reports from 20 of the 29 cities indicate an increase in attendance in the day continuation schools of approximately 33 per cent and an increase in per capita costs and total disbursements of about 15 per cent.

Enrollment.—The total enrollment for 1915-16 in State-aided industrial and continuation schools in 29 cities in Wisconsin was 36,701. The enrollment for the previous year was 28,215.

NEW JERSEY.

Legislation.—Chapter 122 of the session laws of 1916 appropriates \$40,000 for carrying out the provisions of the laws of 1913 relating to State aid for vocational schools for the year ending October 31, 1916. Chapter 76 of the supplement appropriates \$60,000 for the same purpose for the year beginning November 1, 1916.

Chapter 131 empowers the board of education to borrow by temporary loan for current expenses in anticipation of the receipt of moneys which may be distributed to such county in accordance with the provisions of the laws of 1913, provided that such board shall not borrow in excess of 80 per cent of the amount anticipated.

Bulletins.—The following bulletins have been published:

1915. Vocational Education and Manual Training, Annual Report to the Commissioner of Education.

1916. Amendments and Supplements to School Law; Education Bulletin, vol. 2, No. 9, May, 1916.

Plans for training teachers.—A thorough course for preparing home economics teachers has been introduced in the State normal school at Trenton, and an appropriation has been secured for strengthening and enlarging the course during the coming school year, so that teachers may be prepared for all departments of homemaking.

During the summer session Rutgers College maintained a special course for men vocational teachers in methods of classroom management, school discipline, and courses of study.

At both Rutgers College and Ocean City special summer courses for women teachers in vocational schools have been offered.

Conferences.—Several conferences have been held during the year, the most noteworthy achievement being the organization of associations, by counties and groups of counties, for special teachers engaged in vocational work. Wherever the number of teachers in attendance is large enough, as in Hudson and Essex Counties, the groups are subdivided and departmental meetings are held.

Special types of school.—The county vocational schools are rapidly extending their work and usefulness. At the present time four counties have organized: Atlantic, Middlesex, Essex, and Cape May. The scheme of county organization furnishes a larger unit for vocational schools, and, it is believed, will enable many of the smaller municipalities to carry on successful vocational work.

In Cape May County and Atlantic County the experiment is being made of providing an instructor in homemaking to visit a number of centers, giving short unit courses approximately six weeks in length. Instruction is given in various kinds of homemaking activities. These two county supervisors also organize groups of girls for summer work, giving demonstrations in fruit and vegetable canning and other processes.

The agricultural vocational schools in Cape May County and in Atlantic County, attempting strictly vocational work only, have proved very successful.

INDIANA.

New appointments.—During the year Miss Adelaide Steele Baylor has been added to the staff as special agent for the supervision of home-economics instruction in the State and Charles H. Winslow has been appointed as State director of vocational research, to have charge of a number of surveys to be made under the general direction of the State department of public instruction and a survey committee appointed by the State board of education.

The number of schools and departments for industrial education and home economics established in Indiana to date is 113, with a total enrollment for the year just closed of 12,186 students. This represents a net gain for the year of 55 schools and 4,647 students, exclusive of the enrollment of two centers, the reports for which have not been received.

Ten new centers for vocational education in industrial and home-making lines have been organized since the last report, and preliminary arrangements have been made for organizing vocational schools in five additional centers. Two centers in which classes in home making were organized last year have been discontinued.

Vocational instruction in agriculture has been organized in 14 centers, with a total enrollment of 492 students, representing a net gain over last year of eight new centers and 351 students.

During the past year five cities—Indianapolis, Anderson, Vincennes, Hammond, and Terre Haute—have employed directors of vocational education, and in 10 additional centers also the vocational work has been improved and extended. At Fort Wayne the Kerr-Murray factory plant has been leased and will be occupied by the boys' vocational school; Columbus has built a new vocational school at a cost of \$100,000; Terre Haute has acquired for use as a boys' vocational school the former plant of Rose Polytechnic Institute, at a cost of \$100,000, and a model home for the girls' vocational school, costing \$1,600; Anderson has effected a cooperative arrangement with the Remy electrical plant for the offering of electrical courses; and the day and evening work in Indianapolis has been materially extended.

As noted elsewhere, the State board of education, through the office of the State superintendent of public instruction, in cooperation with other agencies, has inaugurated a significant campaign of educational and industrial surveys, for the purpose of developing the vocational education program of the State on a sound basis.

CALIFORNIA.

Legislation.—No new legislation reported.

CONNECTICUT.

Legislation.—No new legislation reported.

NEW MEXICO.

Legislation.—No new legislation.

New appointment.—On December 1, 1915, L. C. Mersfelder was appointed State director of industrial education, in the office of the State department of education, to succeed Miss Myers, resigned.

MAINE.

There has been no new legislation since the last report, and no new experiments in vocational education have been undertaken. The chief of the division of industrial training in the State department of public instruction, B. H. Van Oot, has resigned.

5. THE PROBLEM OF CERTIFICATING TEACHERS.

In February, 1914, Bulletin 19 was issued by the National Society for the Promotion of Industrial Education, which accomplished much in the way of focusing attention upon the problems of selecting and training teachers for industrial schools. Much, however, remains to be done.

During the past year attention has been called in various ways to the importance of applying the same principles that should determine the selection and certification of industrial school teachers to the selection and certification of manual training shop teachers, and other special teachers, in the public schools. If one is to teach machine-shop practice to machinist apprentices, or printing to eighth grade boys, or ensemble playing to a group of candidates for the high-school orchestra, or any one of the increasing number of newer subjects in the schools, a special knowledge and a special skill or technic are required of the teacher that can not be assumed to be in the possession of every person who is 18 years of age or over and who has had a high-school education. Stated in this form, there is doubtless general acceptance of the proposition.

Prevailing practice in the examination and certification of teachers indicates that there is not a disposition to assent to the equally valid contention that the special technical skill demanded of the teacher of such subjects as the examples mentioned can not be detected and evaluated by one who does not himself understand something of it, and that the possession of such skill can not be demonstrated by replies to a questionnaire.

6. COOPERATION BETWEEN SCHOOLS AND OTHER AGENCIES.

One of the notable features characteristic of the year's progress is the increasing number of instances of successful cooperation between schools and other agencies for the accomplishment of definite

educational ends. To indicate the nature of the methods employed and the results achieved, the following selected cases are noted.

SHORT COURSES IN CONCRETE.

For one week beginning June 26, 1916, a special short course in concrete construction for instructors and supervisors of manual training and industrial education was held in Chicago, Ill. The co-operating interests were Lewis Institute and the extension division of the Portland Cement Association. It is reported that more than 150 instructors were present, representing 21 States.

A staff of demonstrators, special lecturers, and assistants was organized, and a careful program for the work was prepared. The instruction included lectures on the materials and processes employed, demonstrations, and practical laboratory work in all of the important phases of cement and concrete construction. The object in view was to assist manual training and vocational teachers to acquire sufficient knowledge of the subject matter and processes and mastery of the technic to enable them to introduce practical laboratory courses in concrete construction in their schools.

TRADE AGREEMENTS.

One of the results of the Minneapolis Vocational Education Survey was a unique contribution to the administration of industrial education and to the technic of cooperation. This was the inauguration of trade agreements of five different types between organizations of employers and employees, which were also formally approved by the Minneapolis Board of Education, the Minnesota State Federation of Labor, the Minneapolis Civic and Commerce Association, and the trustees of Dunwoody Institute. In accordance with the terms of these agreements, these organizations are to cooperate in planning and supporting certain vocational courses which are to be offered in Dunwoody Institute, the Girls' Vocational High School, and the technical department of the Central High School.

The support of employers takes the form of agreement to utilize the graduates of the proposed courses as their first source of supply of new workers; in certain cases minimum wages for such workers are established; in certain trades periods of instruction are scheduled for the dull season, the apprentices to receive one-half of regular wages while in school; representatives of the employers will assist on advisory committees for the purpose of organizing courses of study and maintaining proper standards.

The support of organized labor takes the form of agreement to require apprentices to attend such courses of instruction as are offered in the various trades, and to recognize the instruction given

as a definite part of the apprenticeship requirements; representatives of the unions will also serve on the proposed advisory committees.

Holyoke, Mass.—The development of the spirit as well as the actual form of cooperation is further exemplified in the experience of Holyoke, Mass. A group of 21 workers in the textile mills, members of the local union of the United Textile Workers of America, applied to the school authorities for a course in the evening vocational school that would help them meet some of their special problems. A class was organized for loom fixers, and practical instruction was given for a period of three months in weave formation and cloth analysis.

A second group of 32 men applied later for instruction in practical work on looms. The board of trustees arranged for the use of a vacant room in the basement of the high school, and several of the local mills loaned or donated the necessary equipment. The looms were installed, after working hours, by men interested in the class. The line shafting was hung by students from the day vocational classes in carpentry, machine shop, and millwrighting.

Kenosha, Wis.—One of the women's clubs, in cooperation with the public schools, has established a school for training housemaids. The students are employed for a few hours daily in the homes, in order that they may practice under normal conditions what is being learned in school. The aim is not only to help solve the home-service problem, but also to make the girls such efficient workers that they can command good wages.

These widely separated examples of cooperative effort are but illustrative of many others which might be cited, and indicate something of the development of a principle of action which is of great significance for the cause of popular education. This newer conception of education is rapidly gaining ground in the consciousness not only of the schoolmaster, but of the citizen, and there is taking place a mutual readjustment in appreciation of responsibility. It has been suggested, and the suggestion is now being acted upon with salutary results, that the factory, the labor union, the commercial establishment, the woman's club, the parent-teacher association, and other representative groups have cooperative responsibilities with the public school in the education of children and youth.

7. ACTIVITIES OF ORGANIZATIONS INTERESTED IN VOCATIONAL EDUCATION.

Interest in vocational education on the part of educational and other organizations gives no sign of abatement, and the contributions of these organizations constitute an important factor in the progress of the movement. It has been found necessary to condense this section of the chapter.

NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

This society, under the able leadership of Secretary Alvin E. Dodd, continues to be one of the most important factors in the progress of vocational education.

MINNEAPOLIS SURVEY AND CONVENTION.

Early in the spring arrangements were entered into with the city of Minneapolis for making a vocational education survey, and for holding there the ninth annual convention of the society. The survey was in charge of the society's survey committee, and a local survey committee, with Dr. C. A. Prosser as director.

The unanimous opinion of the exponents of industrial education who visited Minneapolis for the convention was that the survey, prepared by six months' work preceding the meeting, was by far the most important feature of the convention. Its value to Minneapolis has been already felt and will save a large amount of money to the city in avoiding mistakes in the future.

An important result of the survey itself was the close relation into which it brought the various interested parties for six months. It was not an academic, but a working business proposition, and as a result of the conferences the business forces of the city are behind it and understand it.

EMPLOYMENT MANAGERS' CONFERENCE.

In connection with the annual convention of the society an informal conference on employment management problems took place at Minneapolis. One of the most important subjects discussed at the conference was the means of reducing the labor turnover; that is, the proportion of the number of employees engaged in a year to the total number of employees on the pay roll. It was urged that this reduction may be affected by (a) proper selection of employees; (b) developing the efficiency of employees; (c) reducing the number of arbitrary dismissals; (d) standardizing the rate of production; (e) protecting the physical health of workers. Other remedies suggested are the establishment of a central employment department, physical examination of applicants, industrial education, and square-deal management.

An important feature was the consideration of the necessity of adequate training for employment executives, this training being such as to develop personality, intellect, and knowledge to the highest possible degree.

The importance of the relation of public employment bureaus to managers of employment was brought out, and the city-State-Federal plan of bringing the man and the job together was indorsed as a

means of diminishing unemployment and checking the great waste involved in frequent labor turnover.

STATE VOCATIONAL SURVEY OF INDIANA.

Work has begun on the State survey of Indiana, referred to elsewhere in this chapter. In the investigations, typical communities will be selected, and the school and city authorities will be urged to create an interest in the work and to cooperate with the experts in gathering information. It is the opinion of the State board that a thorough study of the industries and needs for vocational training in selected communities will make it possible to work out the problem in a successful and comprehensive way. The communities studied will be made typical examples for the rest of the State.

FEDERAL LEGISLATION.

Efforts in behalf of the Smith-Hughes bill for Federal aid to vocational education have been steadily put forth by the society and support for and interest in the measure is greater than at any time in the past. During the past few months considerable information has been spread abroad concerning the measure and efforts to draw together and focus the forces interested have been successful.

President Wilson in his message to Congress, December 7, stated that: "We should give intelligent Federal aid and stimulation to industrial and vocational education as we have long done in the large field of our agricultural industry." In an address on January 27 he further stated that:

There are two sides to the question of preparation. There is not merely the military side; there is the industrial side. An ideal which I have in mind is this: We ought to have in this country a great system of industrial and vocational education, under Federal guidance, and with Federal aid in which a very large percentage of the youth of this country will be given training in the skillful use and application of the principles of science in maneuver and business.

SURVEY WORK BY THE SOCIETY.

There has been extensive correspondence during the year with a number of cities of the country which have asked for advice and suggestion on vocational education, particularly on questions of surveys and studies of industries for purposes of industrial education.

Boston: In response to a request of the Massachusetts branch of the national society, Miss Cleo Murtland, assistant secretary, was assigned to work in Boston for the purpose of securing data about the garment trades of that city.

Cincinnati: The chamber of commerce asked the national society to aid in making a study of the garment trades of that city for the purpose of determining how best to establish a trade school for girls. Miss Murtland was assigned to this work.

New York: A study of the department-store employments was also undertaken by Miss Murtland. A report of this study will be made by the Department Store Education Association, for which organization the work was done.

TRAINING COURSES FOR TRADESWOMEN.

A teachers' training course for tradeswomen was conducted by Miss Murtland during the past summer under the direction of Prof. R. J. Leonard, of the department of industrial education of Indiana University. This course, which was presented according to the policies of the national society, is the first attempt to present teaching methods to a group wholly made up of women from the trades. Eighteen women were enrolled in the course, representing millinery and dressmaking trades and housekeeping. Ten sessions of three hours each were devoted to lectures, discussions, and demonstrations. The afternoons were given over to excursions to places of interest to the women and their work. The experiment was eminently successful and will be continued along similar lines next summer for several groups of tradeswomen and for a small group of professionally trained teachers who are engaged as teachers in vocational schools of this State.

PUBLICATIONS ISSUED AND DISTRIBUTED.

The publication during the year past of a series of news letters has served to emphasize the importance and value of a "house organ" if the society is to extend its influence and keep in touch with its membership and those interested in the subject. During the past year the following publications were distributed to the membership:

Bulletin No. 20. The Proceedings of the Eighth Annual Convention, Richmond, 1914.

Bulletin No. 21. Report of the Minneapolis Survey for Vocational Education, January, 1916.

Bulletin No. 22. Proceedings of the Ninth Annual Convention, Minneapolis, January, 1916.

Reprints:

The Attitude of the American Federation of Labor—*Samuel Gompers.*

The Protocol and Industrial Education—*Julius Henry Cohen.*

Had He but Known—*William C. Redfield.*

The Place of Art in Industry—*Charles A. Prosser.*

Education and Industry Debating over Children—*Owen Lovejoy.*

Fitting Millions for Their Work—*Alvin E. Dodd.*

The Selection and Training of Teachers of the Household Arts—*Charles A. Prosser.*

Evening Short Unit Courses in the Worcester Girls Trade School—*Helen R. Hildreth.*

The Evolution of the Training of the Worker in Industry—*Charles A. Prosser.*

The society has distributed, through the courtesy of other agencies, the following:

Some Facts Concerning the People, Industries, and Schools of Hammond, Indiana—*R. J. Leonard.*

A Study of the Printing Trades of Cincinnati—*Cincinnati Chamber of Commerce.*

A Study of the People of Indiana and Their Occupations; Bulletin of the University of Indiana—*R. J. Leonard*.

Bulletin No. 159, U. S. Bureau of Labor Statistics—Short Unit Courses for Wage Earners.

Bulletin No. 162, U. S. Bureau of Labor Statistics—The Report of the Vocational Survey of Richmond.

Vocational Education, Reprint from the Annual Report of the Commissioner of Education—*William T. Bawden*.

NATIONAL VOCATIONAL GUIDANCE ASSOCIATION.

Two important meetings of the association have been held, one at Oakland, Cal., August 17, 18, 1915, in connection with the International Congress of Education, and the second at Detroit, Mich., February 21, 22, 1916, in connection with the annual convention of the Department of Superintendence. Limitations of space prevent adequate reports of these meetings. At the Detroit meeting officers for the new year were elected, including: President, Meyer Bloomfield, Boston, Mass.; secretary, W. Carson Ryan, jr., Bureau of Education, Washington, D. C.

The association now publishes a monthly bulletin, containing reports of conventions, reviews of current books and magazine articles, lists of helpful reference material, and general information relating to the development of vocational guidance.

VOCATIONAL EDUCATION ASSOCIATION OF THE MIDDLE WEST.

The Vocational Education Association of the Middle West held its second annual convention in Chicago, March 30 to April 1, 1916. The following topics received special attention at the sessions of this convention: The experiment with the Gary system in New York City and its relation to vocational education; the importance of social as well as individualistic ideals in education; vocational education for women and girls; school and employment; the vital importance of agricultural education.

The officers for 1916-17 are: President, George H. Miller, of Sears, Roebuck & Co., Chicago; vice president, Paul C. Stetson, principal of South High School, Grand Rapids, Mich.; secretary, Albert G. Bauersfeld, Lane Technical High School, Chicago; treasurer, Miss C. H. Smith, of L. C. Smith Typewriter Co., Chicago.

NATIONAL EDUCATION ASSOCIATION.

The committee on vocational education of the National Education Association presented a preliminary report at the 1913 convention in Salt Lake City, and a supplementary report at the 1914 convention in St. Paul. The revised report has been published as a bulletin by the Bureau of Education, 1916, No. 21.

The report is prepared in the form of a handbook for the guidance of superintendents of schools in studying the needs of a community, and in introducing the various types of schools designed to meet these needs.

THE AMERICAN FEDERATION OF LABOR.

The American Federation of Labor has again emphasized its cooperation with the forces that are endeavoring to study the problems of vocational education, and to seek the organization everywhere of schools and courses of instruction that shall advance the best interests of all concerned and shall be based on sound principles of public policy.

There are two principles which are conceived by the officers of the federation as of paramount importance: (1) The agitation for the reorganization of the public school system, in order to make it serve more efficiently the real needs of boys and girls and young people, must not be permitted to take the form of, or result in, a movement to diminish or abridge in any way existing opportunities for general education. The reorganization of the schools now in process of development, involving the introduction of various kinds of courses designed to meet the needs of all types of children, is believed to be progress in the right direction in the main.

Under existing conditions all children can not attend colleges and advanced technical schools, and become doctors and lawyers and engineers; consequently there is a real demand that the educational system shall recognize other legitimate and worthy aims besides that of preparing for college and the higher professions. Nevertheless, it is held, the newer types of courses that are developed in the attempt to meet these recognized needs must not presuppose any inevitable limitations upon the prospects of future advancement of the young people who avail themselves of the opportunities offered. The representatives of labor properly maintain that the door of educational opportunity and advancement must always be kept open, and every individual should be permitted to progress just as far as personal ability and willingness to apply himself will carry him. In this view, vocational education is not to be thought of as a substitute for general education, but as an essential part of it. To every one should be vouchsafed the opportunity for a broad all-round education that makes for complete manhood or womanhood, which should be supplemented by adequate preparation for a chosen occupation.

(2) The second principle emphasized by the federation has to do with the method of organizing and conducting vocational schools. The position taken is that whatever is attempted at public expense under the form of vocational education should be under public and

not private control, and, further, that the control of all types of school supported by public taxation should be centered in a single authority responsible directly to the will of the people; that is, the local board of public-school trustees in a city or town and the State department of public instruction in a State.

Resolutions in support of these contentions, as recommended by the committee on education, were adopted at the thirty-fifth annual convention, held at San Francisco, Cal., November 17, 1915.¹

Further explanation of the point of view of the workers is given in an editorial by President Gompers, from which the following extract is taken:²

To assure every child equal free opportunities for the kind of education which meets his needs and talents is the only basis for genuine equality of opportunity—the only condition upon which democracy will function.

The old cultural ideals of education, dealing with the abstract only, denied to the great majority of children an education adapted to their minds and natures, and hence failed to fit them for the duties and possibilities of the work of life. There have come ideals of an education that teaches out of life and work; that deals with the concrete materials of environment and the duties and activities of life. This education seeks to put into the lives of all that understand appreciation of the significance of service performed in all the relations of life—an appreciation that shall illuminate all of work and life.

Because the wage earners have been taught by life that equal educational opportunities, adapted to the needs of all, are a condition requisite to equal economic opportunities, they have been foremost in pressing demands for the incorporation of industrial education and vocational training as a part of our public-school system.

The interest of the federation is not confined to problems of industrial education, as an examination of the report of the committee on education will show. Not only does the national body have a special committee for the broad study of educational problems, but State and local organizations have established similar committees. One of the latest instances of this action is that taken at the annual convention of the Wyoming State Federation, held at Casper, Wyo., July, 1916, at which time President H. W. Fox recommended and secured the appointment of a permanent committee on education.

During the past year the federation has cooperated through its representatives in important vocational-education surveys and other investigations in the State of Indiana, in Minneapolis, Minn., and elsewhere. At a regular meeting of the national executive council, held in Washington, D. C., June 26 to July 3, 1916, it was decided to recommend a study of the so-called Gary system of public schools.

¹ Proc. Amer. Fed. of Labor, San Francisco convention, 1915; p. 323.

² American Federationist, Feb., 1916, p. 126.

NATIONAL ASSOCIATION OF CORPORATION SCHOOLS.

The fourth annual convention of the association was held in Pittsburgh, Pa., May 30 to June 2, 1916. Considerable attention on the program was given to reports of committees which had been at work during the year, including those on vocational guidance, employment plans, schools for office work, and others.

This convention gave further emphasis to the declaration previously made that the attitude of the association toward the public-school system is that of cooperation, correlation, assistance, and helpful suggestion, rather than of destructive criticism. There was much earnest discussion of the question as to how far the public schools may be expected to carry their activities, and as to what educational functions may legitimately be assumed by industrial corporations. The association is seeking also to ascertain its responsibilities with reference to other problems closely related to education, such as vocational guidance, safety, employment, and similar lines of activity.

The 1917 convention will be held in Buffalo, N. Y. Officers elected at the Pittsburgh convention include: President, H. J. Tily, Philadelphia, Pa.; executive secretary, F. C. Henderschott, Irving Place and Fifteenth Street, New York, N. Y.

THE CHAMBER OF COMMERCE.

Among the powerful national organizations which have been active in the propaganda for vocational education is the Chamber of Commerce of the United States. At its first annual meeting in January, 1913, resolutions were adopted by the national chamber indorsing the principle of Federal aid and encouragement in the establishment of vocational schools of manufacture, commerce, agriculture, and home economics. The convention also indorsed the Page bill, which was before Congress at that time, and urged its enactment.

On January 18, 1916, the committee on education submitted a report on the subject of Federal aid for vocational education. This report was considered at the fourth annual convention, and on April 1, 1916, a resolution was adopted providing that the recommendations of the committee be submitted to referendum vote of the constituent members.

On June 2, 1916, a special bulletin was issued making public the recommendations and the result of the balloting, as follows:

1. The committee recommends liberal Federal appropriations for promotion of vocational education in the United States. Votes: 831½ in favor; 109½ against.
2. The committee recommends that Federal appropriations should be allotted among the States upon a uniform basis and should bear a uniform relation to

appropriations made by the States for like purposes. Votes: 828 in favor; 95 against.

3. The committee recommends the creation of a Federal board, to be representative of the interests vitally concerned and to be compensated sufficiently to command great ability. Votes: 788½ in favor; 143½ against.

4. The committee recommends that the Federal board should be required to appoint advisory committees of five members each, representing industry, commerce, labor, agriculture, homemaking, and general or vocational education. Votes: 783½ in favor; 136½ against.

The bulletin indicates that the national chamber now stands committed to all of the recommendations, "in that more than one-third of the voting strength of the chamber was recorded and more than two-thirds of the vote thus cast, representing more than 20 States, was recorded in favor of each of the proposals."

An examination of the tabulated returns shows that negative votes on one or more of the four propositions were cast in 18 of the 48 States, and that these 18 States lie scattered pretty well over the country. In no one of these States did any one of the four recommendations fail to carry.

8. INVESTIGATIONS AND SURVEYS.

The fund of available information to be used as a basis for vocational education proposals is rapidly growing through the accumulation of the reports of special investigations. Of these investigations four have been selected for brief reference at this time.¹

THE CLEVELAND EDUCATION SURVEY.

Nine of the volumes of the Cleveland survey report relate to various phases of vocational education, as follows:

- Boys and Girls in Commercial Work.
- Department Store Occupations.
- Dressmaking and Millinery.
- Railroad and Street Transportation.
- The Building Trades.
- The Garment Trades.
- The Metal Trades.
- The Printing Trades.
- Wage Earning and Education (summary).

Of these nine volumes, all but the last have appeared. To illustrate the method of treatment, the report on the building trades will be reviewed briefly. There are six chapters: Nature of building work; number in the trades and sources of supply; conditions of labor; training before the boy leaves school; training after leaving school; summary.

After outlining the kinds of work performed in the various trades, figures are given to show that there are about 30,000 men engaged

¹ See also Ch. XXI of this report.

in the building industry in Cleveland at the present time, of whom nearly two-thirds are in the skilled trades. Journeymen come chiefly from outside the city, many coming from abroad; the only other source is through apprenticeship. The general decline of the apprenticeship system appears to have affected the building trades less than any other industry, but the burden of training apprentices has been shifted from the employer to the unions.

The building trades are about 90 per cent organized, and in wages and hours of labor the working conditions are generally better than in any other industry in Cleveland. The strength of the unions is declared to be a greater factor in the establishment and maintenance of wage standards than skill or technical knowledge. Irregularity of employment is greater in building work than in any other leading industry. In general, health conditions are good, as are opportunities for advancement for the industrious worker.

The report recommends that vocational training for boys who will enter the building trades be started not later than the seventh year in school, in order that something worth while may be accomplished before the termination of school life at the end of the compulsory school period. It is doubtful whether satisfactory courses can be offered in existing elementary schools, since the number of boys is usually too small to permit of the necessary differentiation of courses. The junior high school is recommended as a partial solution of the problem, offering a general industrial course, which should give much emphasis to applied mathematics, greater variety in shopwork than is now given, and more attention to elementary science, mechanical drawing, and economic and industrial conditions in wage-earning occupations. Since less than 2 per cent of the graduates of the Cleveland technical high schools become artisans, the report recommends the organization of a special two years' industrial course to fill the gap now existing between the end of the compulsory school period and the entering age in the skilled trades.

With respect to training in the industry itself, the analysis of conditions shows three important changes in apprenticeship that have come about: (1) Progressive specialization and subdivision of the industry have made the apprentice a much less important factor than he was formerly; (2) growth in the size of contracting firms has made the relation between apprentice and employer less direct and personal; (3) employers interested in the education of apprentices aim chiefly at the training of foremen rather than of journeymen workmen. The courses which have been offered hitherto in the evening schools of Cleveland do not appear to meet the needs fully, since less than 1 per cent of the workers in the trades are enrolled in the schools, and those who do attend are rarely held for more than

one or two brief terms. Among the conditions requisite to success are included more active cooperation on the part of both employers and unions, accompanied by some form of compulsion to secure school attendance of apprentices and more freedom and flexibility of organization for evening schools.

The constructive recommendations are summarized under five headings: Reduction of retardation throughout the elementary schools; introduction of general industrial courses in the seventh, eighth, and ninth years; establishment of a two years' industrial trade school for boys; more specific and practical evening trade extension classes for apprentices; a considerable variety of practical evening trade extension classes for journeymen workmen, directed by thoroughly competent persons who give their whole time to the work and who have the necessary freedom of action in organizing classes and adopting and changing courses.

MINNEAPOLIS VOCATIONAL EDUCATION SURVEY.

On January 1, 1916, the report of the Vocational Education Survey of Minneapolis was published, and its principal recommendations were discussed three weeks later at the convention of the National Society for the Promotion of Industrial Education, which was held in that city. The principal features of the Minneapolis survey were outlined in the last report, and since it is impossible to review a 700-page book in the space available here only a few points can be touched on.

One of the most valuable contributions of the Minneapolis survey was the formulation of several types of trade agreements, involving cooperative educational activity, referred to elsewhere in this chapter.¹ Another unique feature was the study of "What vocational education is needed for home workers?" The special subcommittee having this study in charge analyzed three types of home for investigation: (1) The home where the household labor is performed by paid employees; (2) the home in which the work is performed by members of the family, but in which comfort and often luxury exist; (3) the home which is economically on the verge of bare existence.

Homes of all three classes were studied, in some cases by personal visit and in others by questionnaire. The conclusions resulting from the study are chiefly negative and are valuable as indicating the difficulties that must be surmounted before this extremely important problem is solved.

Building on the data accumulated in the Richmond (Va.) Industrial Education Survey,² the report presents a mass of informa-

¹ See p. 155.

² See The Richmond Industrial Education Survey, Bull. 162, U. S. Bureau Labor Statistics.

tion relating to the principal groups of occupations in Minneapolis and vicinity that will afford material for study for years to come.

The report closes with a chapter of valuable and suggestive outlines of proposed courses of study. The courses of study resulted from a series of conferences between representatives of the survey staff and the trades involved and carry the formal approval of both employers and employees. In the carrying out of the general program recommended by the survey, one of the chief factors supplementing the work of the public-school system is the Dunwoody Industrial Institute, established by a private trust fund.

THE DENVER SCHOOL SURVEY.

The study of vocational education, published as Part III of the report of the Denver School Survey, May, 1916, was made by Dr. C. A. Prosser, director, Dunwoody Institute, Minneapolis, and Prof. W. H. Henderson, University of Wisconsin, Madison, under the auspices of the school survey committee representing the Denver Board of Education and the Colorado Taxpayers' Protective League.

With reference to manual training in the seventh and eighth grades, the report recommends that the prevocational aim be emphasized and that a much greater variety of tools, materials, and processes be introduced into the shopwork. It recommends also that shop teachers be sought who have had practical experience in the industries and who will take an interest in boys and their problems. An advisory committee is suggested to assist the school authorities to work out in the high schools a type of technical course needed to fit the conditions as outlined.

With reference to the Denver School of Trades, the recommendations include more emphasis on evening trade-extension courses for apprentices and journeymen, as well as development of part-time and dull-season day classes for apprentices. Advisory committees and more definite understandings or agreements involving the schools, the unions, and employers are also urged.

It is recommended that commercial courses in the public schools be reorganized, that a new two years' course be developed, and that all the work be rearranged on the basis of smaller units, so that a student will not need to continue in school for so long a time before acquiring definite knowledge and skill of value in the business world. The addition of courses in salesmanship and provision for practical laboratory experience in commercial establishments are also recommended.

More thorough and systematic work in drawing and in home economics is urged throughout all the schools under supervisors who are given authority to direct the work throughout the entire city.

The report advises the creation of the office of assistant superintendent "with a salary sufficient to attract to the position a man with the ability, experience, and diplomacy necessary to initiate and develop policies and plans for vocational training in the many different lines in which Denver is interested." In this position should be centered the responsibility for all the vocational work of the city, together with prevocational education, manual training, home economics, and their correlations with other studies. A growing budget, based upon a constructive policy of development, is deemed necessary if the local school authorities hope to accomplish satisfactory results.

STATE VOCATIONAL SURVEY OF INDIANA.

For the first time a vocational education survey on a State-wide basis has been projected, the field work beginning in May, 1916. The Indiana State Board of Education has taken the initiative in bringing about the organization of a survey committee to carry on the work under its direction. The committee includes representatives of the State board of education, city school superintendents, the State university, and the National Society for the Promotion of Industrial Education. C. H. Winslow, formerly of the United States Bureau of Labor Statistics, has been appointed director of vocational research, and will have charge of the survey.

The subjects of study will include the following: A large industrial city, such as Indianapolis; small industrial communities, such as Richmond and Evansville; rural counties, with the county as a unit; courses in manual training in the public schools; the 32 schools in the State now giving vocational training.

The results of these investigations will be presented for discussion at the annual convention of the National Society for the Promotion of Industrial Education, to be held at Indianapolis, in January, 1917.

9. VOCATIONAL GUIDANCE.

The most notable evidences of progress in the field of vocational guidance are found in the increased interest in the subject in public schools and in colleges and universities. During the pioneer stages much of the constructive work in vocational guidance was done by semipublic or private agencies, but now that the way has been blazed to a certain extent, more and more educational institutions are recognizing their responsibilities and their opportunities.

During the year the Chicago (Ill.) Board of Education has assumed responsibility for the vocation bureau which was organized under the direction of Miss Anne Davis. During the period while it was demonstrating the need for its existence, the bureau was maintained by the Chicago Federation of Women's Clubs. The change

in the auspices under which the bureau is to do its work involved an increase in the force from three to eight, and consequently means greater opportunity for service.

It is reported that employers testify to the value of the service rendered in sifting and classifying the boys and girls who seek positions. Notwithstanding the insistence on an initial minimum wage somewhat higher than that usually paid to beginners, employers are glad to patronize the bureau and to indorse its methods.

Evidence of the growing interest in the problem of vocational guidance in higher institutions, of which other instances might be cited, is found in the report of a vocational conference held at the University of Nebraska, March 21 and 22, 1916, under the auspices of the women's clubs. The principal speaker was Miss Helen Bennett, director of the Intercollegiate Bureau of Occupations, Chicago, and the special subject of discussion was the future occupations of girls who do not look forward to teaching school.

Plans have been perfected for a new type of cooperation in dealing with the problem of juvenile employment in Pennsylvania. A new State employment bureau was established at Harrisburg, October 1, 1915, with branch agencies to be opened later in Philadelphia and Pittsburgh. In Philadelphia, for example, a conference was held, attended by representatives of the State department of labor, the State department of public instruction, and the Philadelphia public schools, at which a plan was outlined for carrying on the work. According to this plan, when a boy or girl between the ages of 14 and 18 years applies for work, the application is referred to the vocational education division of the public schools. Careful inquiries are made, and the essential facts concerning the candidate are recorded. The available information concerning opportunities for employment is gone over, and the bureau is then in position to advise with the candidate as to the most promising directions in which to look for employment, and to suggest ways and means of preparing for more efficient service and promotion.

An experimental course one year in length for directors of vocational guidance is announced for 1916-17 by the Women's Educational and Industrial Union, Boston, Mass.

The course aims to fit women of adequate preliminary training to become vocational advisers in grammar and high schools or in social agencies by providing them with a knowledge of industrial conditions and methods of industrial investigation and the use of statistics, and by supplying such other training as is essential, including some practical application of the principles and methods studied.

Vocational conference for high-school girls.—More than a hundred girls from all parts of the State, representing local and county

high schools, gathered at the State college at Bozeman, Mont., November 18-20, 1915, to attend the third annual vocational conference, called by the college in cooperation with the State Federation of Women's Clubs. Many men and women who have achieved success in their several vocations addressed the conference, discussing the various lines of work other than teaching that are now open to women. Some of the occupations considered are: Agriculture, newspaper work, science work in State and municipal laboratories, nursing, home-economics extension, training for Christian social service, office work, costume designing, police duty, home making, and making money in the home.

Chicago, Ill.—The public library, a committee of the association of commerce, and the board of education in cooperation have published a list of books for boys and girls, entitled "What occupation shall I choose?" The books are listed in four groups: "Men and Women Who Have Made Good," "How to Succeed," "Vocations for Boys," and "Vocations for Girls."

Boston, Mass.—Some extremely interesting and significant figures have been collected by the public school authorities in Boston, Mass. Formerly it was found that children who left the grammar grades to go to work changed their places of employment an average of three to four times during the year. During the first year after the continuation schools opened only about 15 per cent of the 2,300 children in attendance changed places.

10. PREVOCATIONAL EDUCATION.

Much importance attaches to the discussion of prevocational education during the year, and to the tangible results in courses and classes established. Critics continue to assail vigorously the term "prevocational," on the ground that it can not be applied logically to a single line of educational effort, as has been done. Nevertheless the designation appears to have achieved a certain currency.

A part of the criticism has been due also to the confusion that prevails as to the real meaning of the term prevocational. By vocational education is understood instruction designed to make one more efficient in some specific chosen vocation. A very important service which may be rendered the individual before a choice has been made, and hence before specific vocational education can begin, is to assist him in the acquisition of sufficient knowledge about a number of typical and important groups of occupations, upon the basis of which an intelligent choice may be made. The plan of having boys and girls actually engage in the fundamental activities characteristic of a variety of possible occupations, with the accompaniment of an examination of the meaning and relationships of these activities, with

related studies in language, mathematics, science, and civics, appears to have met with much favor in localities where it has been tried. To this work, since it precedes the giving of specific vocational education, has been given the descriptive name "prevocational education."

As an example of the variety of practical activities that may be incorporated in a school course when suitable facilities are available, the announcement of courses open to boys in the Menomonie (Wis.) public schools is interesting. By a cooperative arrangement with Stout Institute, 16 lines of work are offered, each of which is given for two periods daily, five days per week, for nine weeks. All boys in the seventh and eighth grades and first two years of high school thus change subjects in a regular scheme of rotation every nine weeks. The courses offered are:

Seventh grade: Architectural drafting, bricklaying, carpentry, plumbing.

Eighth grade: Mechanical drafting, cabinetmaking, forge shop, printing.

First year high school: Freehand drawing, joinery, wood turning, printing.

Second year high school: Mechanical drafting, patternmaking, foundry, machine shop.

During the third and fourth years of the high school the students are permitted to specialize in any one of the following eight elective subjects, the choice being made presumably on the basis of the experiences of the four years preceding: Machine drafting, foundry, machine shop, forge shop, carpentry, plumbing, bricklaying, printing. The subject chosen may be taken for two periods daily, five days per week, for the two years.

11. CHANGING ATTITUDE TOWARD MANUAL ARTS COURSES.

A number of events during the past year or two seem to indicate a tendency to recognize more fully the claims and the achievements of manual arts courses in the public schools. The change in attitude has to do not only with the manual arts as a part of general education, but also as a factor in the program for vocational education.

Some years ago statements in criticism of a certain formal type of manual training, and characterizing the work as consisting of the "fads and frills" of education, emanated from a commission created to study the problems of industrial education in an eastern State. Because of the standing of the commission, and the vigor with which the point of view was presented, these statements gained considerable currency, and by others were thoughtlessly applied to manual training in general, in some localities without even the formality of adequate investigation of the work deemed worthy of condemnation. Thus it came about that many believed that there was considerable weight of authority for the assertion that manual arts courses as such are of no value in the field of vocational education.

It was inevitable that there should be a readjustment in both popular and expert educational opinion, since there are many places in which work of demonstrated value in the manual arts has been carried on for years. The earlier experiments showed, furthermore, that some understanding of the place and possibilities of the manual arts in the schools is essential to any adequate grasp of the problems of vocational education, and quite logically many of the leaders in the latter movement have been drafted from among those who had done notable work in the former field.

One of the events showing clearly the newer point of view was referred to in the last report,¹ where, in the account of the Cincinnati conference of superintendents of public schools on the problem of vocational education in the small city, it was reported that:

The trend of the discussion seemed to indicate the belief that practical and efficient work in the manual arts and homemaking courses constitutes the first step toward vocational education. After these departments have been well established, they can be used as a basis upon which to develop subsequent and more specialized courses as the needs become clearly defined.

Another important evidence of change is to be noted in the method of investigation adopted, and the subsequent pronouncement made, in connection with the subject of manual training in the Minneapolis Vocational Education Survey.

The findings of the Minneapolis survey, and the discussions at the convention, left no room for doubt that the society now recognizes the important contribution which the manual arts courses in the high school may make directly to genuine industrial education.²

Not only did the survey employ for this part of the work an investigator who had been for a number of years a recognized leader in the manual training field, but the findings were submitted before publication to a special committee of seven experts in this field. In approving the findings and recommendations of the survey, in general, the committee reported certain recommendations of its own, including: (1) Reorganization of the elementary schools so as to offer a wider variety of manual activities for all children; (2) pre-vocational courses in the upper grades of the elementary schools in order to (a) interest and hold motor-minded children, (b) furnish new avenues of expression in learning and doing, (c) aid in proper training in book subjects, and (d) help young people to select the kind of training and the kind of occupation they desire to follow; (3) further development of the intermediate school or junior high school; (4) a considerable variety of elective short vocational courses in the high school, under a liberal arrangement of entrance requirements; (5) cooperation of representatives of workers and employers

¹ See Educ. Rep., 1915, Vol. I, p. 266.

² Editorial, *Manual Training and Vocational Education Magazine*, Mar., 1916, p. 553.

with the school authorities in developing plans for vocational education.

Other evidence might be cited, but enough is here presented to suggest the growing disposition to recognize the importance of the manual arts (drawing, manual training, cooking, sewing, and housework) when properly organized and conducted, in at least these directions: (1) As a necessary part of the general education that should be provided for all children; (2) as a means of assisting young persons to determine vocational aptitudes; (3) as a foundation upon which to base specific vocational courses after intelligent choices have been made.

Not only is there a change taking place in the attitude of educational leaders toward the claims of the manual arts, but in many places there is evident a changing attitude on the part of manual arts teachers and supervisors toward their own work. There are indications of a disposition to take themselves and their work more seriously, and to vitalize the course of study by the introduction of projects and undertakings as distinguished from courses of models or exercises. A few examples selected at random to illustrate this tendency are appended at the close of the chapter.

12. ITEMS OF SPECIAL INTEREST.

Dignity of work.—One of the important values of vocational education is to be sought in a change in the spirit of the workers themselves, and too often this is overlooked or ignored entirely. This point has been commented on by Mrs. Lucinda W. Prince, of Boston, Mass., who organized several courses in salesmanship in that city. The instruction in salesmanship as given in the high schools, together with the practice in the stores, has resulted in visibly raising the self-respect and status of the sales girl. Before such classes were organized, it was usual for office girls to regard themselves as on a somewhat higher vocational and social plane than the sales girls in the same store, and in this classification the sales girls themselves were inclined to acquiesce.

Now, however, the attitude has completely changed, and it is asserted that the high-school classes in salesmanship are responsible for the change. The work of the sales girl has been studied, analyzed, and reduced to the application of recognized principles; efficiency becomes to a certain extent a question of mastery of these principles and skill in their use; the sales girl's job is thus elevated to the status of a skilled trade.

The change in the individual is a new conception of the dignity of work in general and of the chosen occupation in particular. There is a satisfaction that comes with mastery of certain of the forces of

one's environment, and a pride inseparable from acquired skill and the achievements it makes possible. All of this does not mean less respect for any other who is worthy of respect, but more respect for oneself—one of the foundation stones of character building.

Scranton, Pa.—By the will of the late O. S. Johnson funds have been provided for the establishment of a "manual training school where boys and girls can be taught such useful arts and trades as may enable them to make an honorable living and become useful members of society." According to the terms of the will the school will be under the direction of a self-perpetuating advisory board of five members, which is to have "the largest discretionary powers in regard to the whole subject, confined only by my direction, that the object of this charity shall be the founding and maintaining of a manual training school." The estate amounts to \$1,300,000, and about one-third of the income is now available for the school.

Robert B. Keller, of the faculty of the college of engineering, University of Illinois, has been appointed director of the school, and has been spending the greater part of the year in visiting trade and technical schools, in studying the educational needs of the workers in Scranton and vicinity, and in preparing preliminary plans for the operation of the school in its initial stages.

In a general way the field to be occupied by the school is indicated by the fact that of the 52,000 wage earners reported in Scranton, 17,000 are in manufacturing and mechanical industries and 12,000 in anthracite coal mining.

Portland, Oreg.—Considerable progress has been made during the year in carrying out the provisions of the will of Mr. S. Benson, a wealthy timber merchant, who left a gift of \$100,000 for the establishment of a trade school in Portland, Oreg., on condition that the school district contribute an equal amount. In addition to raising the sum specified, the city purchased a site for the school, at a cost of \$160,000. It is expected that other gifts will materially increase the total amount available.

The new school is named the Benson Technical High School, and will take the place and do the work of the Portland School of Trades, which has outgrown the quarters in which it has been housed during the past two years. The courses for boys include: Carpentry, cabinet-making, foundry, plumbing, electrical construction and inspection; for girls: Cooking, sewing, millinery, and other subjects.

Brooklyn, N. Y.—A new trade school has been opened, the first in the borough of Brooklyn as a part of the public school system. Temporary quarters have been secured on the seventh floor of an office building. The capacity of the school is 224 boys.

Fort Wayne, Ind.—The following courses were offered in the vocational school during the year: Wood turning and pattern making, cabinetmaking and wood finishing, carpentry and joinery; millwrighting, electrical work, printing, metal work; commercial illustrating, mechanical drawing; millinery, home making, dressmaking, cookery, catering; salesmanship, art and design, machine operating.

New York, N. Y.—The minimum requirements for admission to the examinations for positions as teacher in a vocational school in New York City are at least five years' experience as a journeyman (or in a higher position) in the vocation in which the applicant seeks a license as teacher, in addition to at least one year of successful experience in teaching the same vocation.

New York, N. Y.—A national conference on industrial education was held in New York City from September 23 to October 2, 1915, under the auspices of a local committee representing the board of education, the Federation of Women's Clubs, and several other organizations. The chairman of the committee was John Martin, member of the New York City Board of Education.

Imperial, Cal.—Boys in the high-school shopwork courses razed the old shop building, removing the forges and other equipment. The new building was built by a contractor, but the shop students laid the conduit system for the air blast, installed the forges and power machinery, including concrete bases, and an 80-foot line shaft with pulleys and belts. They also painted the storage cabinets, installed the electric wiring, laid the outside drains, constructed a concrete sidewalk and a concrete driveway. The work was done for the most part after school hours and on Saturdays.

St. Paul, Minn.—The school department conducted an experimental industrial summer high school for boys in 1915, offering courses in forge shop, machine shop, cabinetmaking, wood turning. Eliminating all bookwork, the aim was to give to a limited group of 35 boys an insight into commercial methods of production and to turn out a product of use to the schools. For example, a part of the plan was the construction of 200 workbenches to replace broken and worn-out benches in the manual training shops throughout the city. The number of boys desiring to enroll was much larger than the capacity of the school.

Holyoke, Mass.—The local carpenters' union approved the suggestion that the vocational school students construct a modern residence on condition that all work be done under the direction of competent instructors.

CHAPTER X.

MEDICAL EDUCATION.¹

By N. P. COLWELL, M. D.

Secretary of the Council on Medical Education of the American Medical Association.

THE REPORT FOR 1915.

The report last year reviewed the progress in medical education during the previous 10 years. An oversupply of medical schools (162) had given way to a more normal supply. Of the 96 medical colleges which remained, 90 (92.7 per cent) were requiring for admission one or two years of collegiate work, in addition to the usual high-school education. In 1904 only 4 schools (less than 3 per cent) were requiring these higher standards for admission (see chart 1). The report reviewed the progress in medical research since 1876, and showed how this research had greatly enlarged the knowledge of diseases. For many of the common diseases a definite germ origin had been established, and for some diseases a study of the specific germs had revealed methods for their prevention and cure. From the knowledge thus gained some diseases had been practically eradicated, and for others, notably diphtheria, the mor-

¹ In the report of 1913 it was shown how during the 30 years prior to 1904 the rapid development of the middle and western portions of the country, with the springing up of new cities and towns, created an actual demand for physicians. As a consequence the number of medical colleges multiplied rapidly; many were organized as stock corporations and were conducted chiefly for profit, and, indeed, the teaching of medicine became a profitable business. The supply soon more than exceeded the demand, and in 1904 the country had over half the world's supply of medical schools, which were turning out each year large classes of graduates. In 1907 this country had one physician to every 636 people, as compared with one physician to every 1,500 to 2,500 people in the countries of Europe. During this 30-year period medical education was without any effective supervision. Entrance standards were largely disregarded, the medical course generally was crude, and a student who could pay the fee—no matter how ignorant—was seldom rejected. Of course, in spite of this severe competition, some colleges were struggling to uphold fair standards and were furnishing a fair medical training as measured by the medical knowledge of the time. The report enumerated the several agencies which had been working to bring about improvements and showed the positive and rapid results which were obtained after a supervision of medical education was established by the American Medical Association, through a permanent committee, the Council on Medical Education. This was a voluntary supervision, established with the cooperation of a large majority of the medical schools. Without claiming any legal authority and having no power aside from that of publicity, the American Medical Association established a supervision which has led to rapid improvements since 1904. Two standards of preliminary education were urged at that time, one fixing a four-year high-school education for adoption by all colleges by Jan. 1, 1908; the other requiring one year of college work in addition to the high-school education for general adoption by Jan. 1, 1910. The latter was not actually adopted

tality had been greatly reduced. The discovery that some diseases, such as malaria and yellow fever, were transmitted by mosquitoes or other insects had resulted in checking those diseases and in transforming Habana, Panama, and other semitropical localities from pest-ridden communities into safe places for human habitation. The minimum educational standard which, in accordance with the present knowledge of diseases, should be required of anyone who is to treat human ailment, by whatever system or method, was outlined, and it was shown that unless the practitioner was trained in all the fundamentals of medicine he could not safely be intrusted with the delicate life processes of human beings, especially when rendered doubly sensitive in times of sickness.

The number of State boards which were requiring one or two years of college work had been increased to 28, of which number, 10 were requiring, in addition to a four-year high-school education, two years of college work. Thirty-nine medical colleges in the fall of 1914 put into effect for the first time the higher entrance standards, making altogether 82 which were then requiring for admission one or two years of college work, in addition to a four-year high-school education. This accounted for the unusually large reduction in the total number of matriculants in medical schools in the session of 1915-16, namely, 14,891, as compared with 16,502 in 1914-15.

The 1915 report set forth a plan for the reorganization of clinical teaching; commented on the increased endowments for medical education; set forth estimates of the cost for teaching, respectively, the laboratory and clinical portions of the medical course; gave further rules regarding graduate medical instruction, and included a revision of the standards of entrance requirements for medical schools.

until Jan. 1, 1914. The report also gave a list of medical colleges which had adopted the higher standards for admission, and problems of medical education were discussed.

The 1914 report showed that 6 more medical colleges had been closed, by merger or otherwise, leaving 102 remaining. Of these colleges, 78 had put into effect the requirement of one or more years of college work, in addition to a four-year high-school education, and 6 others had adopted the standard to become effective later. Of the 78 colleges, 34 were requiring two years of college work for admission. A list of these colleges and the dates when the higher standard became effective was given. Twenty-five State licensing boards had likewise adopted one or two years of college work as the minimum requirement of preliminary education for those who should obtain the license to practice in those States. Seven of these States had adopted the two-year standard. Many of the medical colleges had received larger endowments; had established better laboratories; had employed a larger number of expert, all-time teachers, and had established better relationships with hospitals, whereby a greater abundance of clinical material became available. A better enforcement of entrance requirements was emphasized as one of the most important needs of both medical and liberal arts colleges. Emphasis was also laid on the care which should be taken by prospective students in the choice of a medical school. This was essential, since diplomas granted by 21 medical colleges were not recognized by from 24 to 32 State licensing boards. It was shown that to enter such a school would be unwise, since in the same time and for even less money it was possible for the student to secure a medical training in one of the highest-grade medical schools, the diplomas of which were recognized by all State boards. Problems of licensing boards were discussed; lists of colleges giving courses in public health and those requiring the hospital intern year as a prerequisite to graduation were given; and rules regulating graduate medical instruction were set forth.

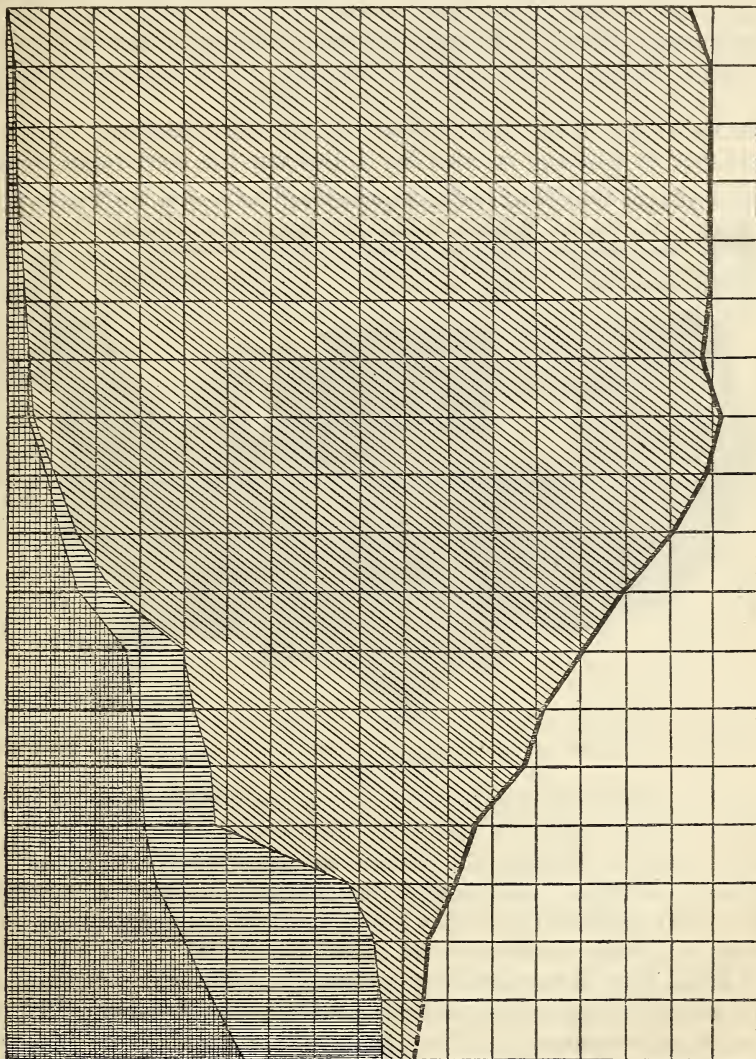
MEDICAL EDUCATION IN 1916.

During the current year the standard of two years of collegiate work as the permanent minimum standard of education preliminary

CHART 1.—RECENT PROGRESS IN MEDICAL EDUCATION.

Although the total number of medical colleges has been reduced since 1907, the number with increased entrance standards (and otherwise greatly improved) has been materially increased.

Total colleges are shown by the heavy line at the top; colleges requiring for admission a high-school education or less are shown by the diagonal shading; colleges requiring 1 year of preliminary collegiate preparation are shown by vertical shading; colleges requiring two or more years of preliminary college preparation are shown by heavy shading.



This is a reproduction of the chart published in the 1915 report, with corrections and revisions for 1916.

to the study of medicine in the United States was firmly established and will be generally adopted in 1918. Of the 96 medical colleges, 62 (64.6 per cent) were exacting this amount of preliminary educa-

two years of work in a college of arts and sciences approved by the council, or in lieu thereof, an education equivalent to the above, as demonstrated by a fitting and properly conducted examination, approved by the council. Your committee believes that this standard should be adopted at this time so as to bring medical education into better coordination with general education in this country. Nevertheless, it should be understood that this represents the highest requirement of preliminary education that should be legally established in this country. Furthermore, it is recommended that the council cooperate with the National Education Association, with the North Central and the Southern Associations of Colleges and Secondary Schools, and with other educational agencies, in the efforts now being made to save one or two years of the student's time during the period of elementary and high-school education. This saving will enable students to graduate from the medical school at an average age of 24 or 25 years.

Thus the American Medical Association not only favored the adoption of two years of college work as the minimum standard of preliminary education in the United States, but also urged that it represent the maximum standard that should be legally required in the United States. This standard is looked on, therefore, as permanent, and medical colleges should feel assured that in the future no unreasonably high standard is to be forced upon them. This standard was adopted also in the hope that a reorganization of elementary and secondary education—regarding which, in recent years, there has been much discussion—may lead to a saving of one or two years of time in premedical education. The student could then complete his medical training at the age of 24 or 25 years. Such a reorganization would also bring secondary education on a par with that in Austria, France, Germany, Italy, and other countries of Europe.

Those who have been working for the improvement of medical education during the last 12 to 15 years view with much satisfaction the results obtained in so short a time. Including the establishing of a permanent American standard of preliminary education, the progress in medical education has exceeded the highest expectations of those who were acquainted with the serious conditions existing at the time the campaign for improvement began. Many institutions which were conducted for profit have been closed, and the number of high-grade, well-equipped, and well-endowed medical colleges has been increased. Medical education in this country has now reached a stage which is fairly satisfactory and can be referred to without an apology. There are already a score or more of medical schools which are equal, if not superior, to those in any other country. A continuance of the campaign for improvement will result in adding others to this group, and the number of colleges conducted without regard for reasonable educational standards will become fewer each year. For the future there is a hopeful outlook.

COLLEGES HAVING HIGHER ENTRANCE REQUIREMENTS.

The 62 medical schools which are now requiring as a minimum for entrance *two years* or more of work in a college of liberal arts in addition to a four-year high-school education, or which have announced that standard to take effect in the next one or two years, and the year when the higher requirement was or will be put into effect, are as follows:

	Requirement in force.
Alabama.—University of Alabama School of Medicine.....	1915
California.—College of Medical Evangelists.....	1915
College of Physicians and Surgeons, Los Angeles.....	1916
Leland Stanford Junior University School of Medicine.....	1909
University of California Medical School.....	1905
Colorado.—University of Colorado School of Medicine.....	1910
Connecticut.—Yale University School of Medicine.....	1909
District of Columbia.—Georgetown University School of Medicine.....	1912
Howard University School of Medicine.....	1914
Georgia.—Atlanta Medical College.....	1918
University of Georgia Medical Department.....	1918
Illinois.—Hahnemann Medical College, Chicago.....	1916
Northwestern University Medical School.....	1911
Rush Medical College (University of Chicago).....	1904
University of Illinois College of Medicine.....	1914
Indiana.—Indiana University School of Medicine.....	1910
Iowa.—State University of Iowa College of Medicine.....	1910
State University of Iowa College of Homeopathic Medicine.....	1910
Kansas.—University of Kansas School of Medicine.....	1909
Louisiana.—Tulane University of Louisiana School of Medicine.....	1918
Maine.—Bowdoin Medical School.....	1916
Maryland.—Johns Hopkins University Medical Department.....	1893
University of Maryland School of Medicine and College of Physicians and Surgeons.....	1918
Massachusetts.—Boston University School of Medicine.....	1916
Medical School of Harvard University.....	1900
Michigan.—University of Michigan Medical School.....	1909
University of Michigan Homeopathic Medical School.....	1916
Minnesota.—University of Minnesota Medical School.....	1907
Mississippi.—University of Mississippi Department of Medicine.....	1918
Missouri.—St. Louis University School of Medicine.....	1918
University of Missouri School of Medicine.....	1910
Washington University Medical School.....	1912
Nebraska.—University of Nebraska College of Medicine.....	1909
New Hampshire.—Dartmouth Medical School.....	1910
New York.—Columbia University College of Physicians and Surgeons.....	1910
Cornell University Medical College.....	1908
Long Island College Hospital.....	1918
Syracuse University College of Medicine.....	1910
University and Bellevue Hospital Medical College.....	1918
North Carolina.—Leonard Medical School.....	1914
University of North Carolina School of Medicine.....	1917
Wake Forest College School of Medicine.....	1908

	Require- ment in force.
North Dakota.—University of North Dakota School of Medicine.....	1907
Ohio.—Ohio State University College of Medicine.....	1915
Ohio State University College of Homeopathic Medicine.....	1916
University of Cincinnati College of Medicine.....	1913
Western Reserve University School of Medicine.....	1901
Oklahoma.—University of Oklahoma School of Medicine.....	1917
Pennsylvania.—Hahnemann Medical College of Philadelphia.....	1917
Jefferson Medical College.....	1917
University of Pennsylvania School of Medicine.....	1910
University of Pittsburgh School of Medicine.....	1913
Woman's Medical College of Pennsylvania.....	1915
South Carolina.—Medical College of the State of South Carolina.....	1916
South Dakota.—University of South Dakota College of Medicine.....	1909
Texas.—University of Texas Department of Medicine.....	1917
Utah.—University of Utah School of Medicine.....	1910
Virginia.—Medical College of Virginia.....	1915
University of Virginia Department of Medicine.....	1917
West Virginia.—West Virginia University School of Medicine.....	1917
Wisconsin.—Marquette University School of Medicine.....	1915
University of Wisconsin Medical School.....	1907

Complete returns show the total registration of students in all medical schools during 1915-16 was 14,022, or 869 less than during the previous session. It is evident that the enrollment of medical students has about reached its lowest ebb, since in the freshman classes there was an increase of 209 over the registration of the previous session—3,582, as compared with 3,373 in 1915. After a few years have been allowed for readjustments under the higher entrance standards, the number of medical students will doubtless return to normal proportions.

There were 3,518 graduates in 1916, only 18 less than in the previous year. The higher qualifications of these graduates are indicated by the fact that this year 948, or 26.9 per cent, also obtained degrees in arts or science prior to, or in connection with, their medical course, as compared with 24.3 per cent in 1915 and only 15 per cent in 1910.

During the year the Medico-Chirurgical College of Philadelphia was merged with the University of Pennsylvania School of Medicine as its graduate school of medicine. Two other medical schools—the Georgia College of Eclectic Medicine and Surgery, of Atlanta, and the Southwest School of Medicine and Hospital, of Kansas City—became extinct. A new but small medical school was opened at Kansas City, Mo., which is not reported to have the recognition of the Missouri State Board of Health, the licensing body of that State. The total number of medical schools in the United States is now 94, or 2 less than last year. One medical college—the Hahnemann Medi-

cal College of the Pacific—which was reported last year as having been closed by merger, will continue to exist until 1918, when its last class will have graduated. Of the 94 medical colleges now existing, 67 are rated in Class A by the Council on Medical Education, 15 are in Class B, and 12 are in Class C.¹

FINANCES OF MEDICAL SCHOOLS.

The total income reported by 82 medical colleges for the session of 1914-15 ranged from \$411,570, the highest, to \$6,080, the lowest, for colleges teaching all four years of the medical course. The average for each college was \$68,277. The income for each college from students' fees ranged from \$113,523, the highest, to \$500, the lowest, the average being \$23,795.

Aside from students' fees, the total incomes ranged from \$329,221, the highest, to the three colleges which had no income aside from fees. The average income aside from students' fees was \$44,482. Included in these figures 34 colleges reported the receipt of a total income from endowments of \$1,164,602, or an average of \$34,253 for each of the institutions which reported income from this source; 28 colleges reported an income from States or municipalities amounting to \$864,285, or an average of \$30,868 for each institution.

Seventy-eight colleges paid out \$2,985,458 in salaries, an average of \$38,275 for each of the schools reporting. The highest sum thus expended was \$139,430 and the lowest was \$3,600. The total expenditure reported by the 82 colleges was \$5,432,768, or an average of \$66,253 for each institution. For 3 colleges all expenditures were paid from students' fees, and for one of these the expenditures were less than the income.

The total enrollment in these 82 medical colleges during the session of 1914-15 was 12,976. The average income received from each student in tuition fees was \$150, and the average expenditure for each student was \$419. The cost of teaching each student during 1914-15, therefore, was nearly three times greater than the amount he paid in fees.²

ANXIETY BECAUSE OF CHANGES IN MEDICAL EDUCATION.

Since the rapid improvement of medical education began—about 12 years ago—alarm has been expressed in some quarters because

¹ A pamphlet containing the classified list of medical colleges, and showing in what States diplomas granted by the various colleges are not recognized as an acceptable qualification for the license to practice medicine, may be obtained by addressing the American Medical Association, 535 North Dearborn Street, Chicago.

² For a detailed table of medical-college finances for 1914-15, see Jour. Amer. Med. Assoc., Apr. 8, 1916, p. 1115.

of some of the results obtained. Certain individuals expressed anxiety lest the marked reduction in the number of medical colleges might lead to a dearth of physicians in the United States. Others noted the increased cost of medical education and the moderately increased charges for tuition and were afraid lest only the "sons of the rich" would be able to secure a medical education. Others were concerned lest the higher standards for admission and the demise of numerous low-standard colleges would take away the opportunities for "the poor boy." Still others laid stress on the thinly populated and rural districts, which they stated were in need of physicians. A few of these statements came from those having no interest in the perpetuation of low-standard medical schools and who were undoubtedly sincere in their expressions of anxiety. As already noted in this report, there are fewer medical colleges, students, and graduates each year than before the campaign for improvement began; the cost of a medical education has indeed been greatly increased; there has been also a moderate increase in the charges for tuition; entrance requirements have been raised; and a number of inferior medical colleges have ceased to exist. It is also probably a fact that rural communities do not have many doctors living in them. A right interpretation of these facts, however, shows there is no cause for alarm. The chief result of the campaign for an improved medical education is that physicians are securing a better medical training, which makes them more able to serve the public in both urban and rural communities.

NO DEARTH OF PHYSICIANS.

A reduction in the number of medical colleges was expected, since in 1904 this country had more than were needed, and at that time the use of paid solicitors, the shrewd method of advertising commonly employed, and the absence or nonenforcement of entrance requirements naturally resulted in an unusually large enrollment of students. The annual output of physicians was correspondingly large. What was needed was a larger proportion of high-grade and well-equipped medical schools, and this was the result obtained. This was brought about chiefly through the merging of two or more medical schools in numerous instances into single stronger and better equipped institutions. Instead of 28,142 medical students and 5,747 graduates each year, only about 6 per cent of whom were from high-standard colleges, there are now only about half those numbers, but from 75 to 80 per cent of them are in high-standard colleges. The facts are shown in the accompanying table:

Quality versus quantity.

Although the totals of colleges, students and graduates have been decreased in 11 years, the numbers of high-standard colleges, better-educated students, and better-trained graduates have been increased.

	1904.	1915.
<i>Medical colleges:</i>		
Totals of medical colleges-----	162	95
Totals having higher entrance standards-----	4	83
Percentages having higher requirements-----	2.5	87.4
<i>Medical students:</i>		
Totals in all colleges-----	28,142	14,891
Totals in high-standard colleges-----	1,761	11,912
Percentages in high-standard colleges-----	6.3	80
<i>Medical graduates:</i>		
Totals from all colleges-----	5,747	3,536
Totals from high-standard colleges-----	369	2,652
Percentages from high-standard colleges-----	6.4	75

Of the medical colleges which remain the majority have higher and better-enforced entrance requirements; they have stronger staffs of salaried, expert teachers; they have more and better-equipped laboratories, and have more abundant and better-used hospital and dispensary facilities. Physicians coming from these medical schools are better fitted to care for the sick and to do a larger part in the preservation of public health than the average of those graduated under former conditions. Even if the output of physicians were entirely discontinued, there would be no danger of a dearth of physicians for years to come. The country still has an overabundant supply of physicians. There is 1 to every 691 people in the United States, as compared with 1 to every 1,940 in Germany, 1 to every 2,120 in Austria, and 1 to every 2,834 in France; that is, referring to conditions before the war. The need, therefore, is not of larger numbers of medical graduates, but of those who are better qualified to care for the sick and injured, and this result is being obtained.

NO DANGER OF A MEDICAL ARISTOCRACY.

As already shown in this report, the cost of teaching medicine has been greatly increased during the past 15 years. The larger number of laboratories, equipped with expensive technical apparatus which the modern school must now possess, the score or more of skilled salaried teachers who devote their entire time to teaching and research, and the increased expenses for administration have added tremendously to the cost of conducting a medical school. This cost has advanced from the point at which there were large profits for those owning the medical school to the present situation, where it exceeds the income from students' fees by 280 per cent; nevertheless, during the same period tuition fees have been increased by

only about 25 per cent. In 8 of the State university medical schools the fees are very low, less than \$100. The excess of expenditure over income from tuition fees has been met by State appropriations or by private gifts and endowments. During the last few years the number of free scholarships for deserving but needy students has been rapidly increased, about 300 having been reported last year in 42 medical schools. It is quite evident, therefore, that equal opportunities for studying medicine are going to be open for all students, regardless of their financial status.

HIGHER ENTRANCE STANDARDS AND THE "POOR BOY."

At the beginning of the campaign for the improvement of medical education the argument commonly used by those interested in maintaining low-standard medical colleges was that the "poor boy" would no longer be able to get a medical education. It is the purpose of higher entrance requirements to keep out of the medical schools students who are too ignorant to master the complexities of the present-day medical curriculum. The opportunities for those who possess the needed preliminary qualifications, but who are poor in purse, have really been increased. Many such students are working all or part of their way through the better medical schools. The deserving but poor boy is the one perhaps who is most capable of looking out for his own interests and usually knows, what some others evidently do not, that it costs no more in time and sometimes less in money to attend a high-grade medical school than it does to attend some of the poorest equipped institutions. It is usually the high-grade, well-endowed medical school also which offers more opportunities for students' self-help; they have more need of such service and more funds with which to pay for it. Again, it is in the well-endowed institutions that free scholarships are rapidly being established. The opportunity for obtaining a thorough medical training is now within the reach of any person who is educationally qualified to undertake it.

BETTER MEDICAL CARE FOR RURAL COMMUNITIES.

The most common argument recently advanced against higher requirements for admission to medical schools has been that rural communities are not supplied with a sufficient number of physicians. That there is, and possibly always has been, a scarcity of physicians in these districts may be granted. It is clear, however, that this lack is not due to the increased entrance requirements of medical schools. As pointed out by Flexner,¹ the existence during a half century of an

¹ Med. Educ. in the United States and Canada, Bull. 4, 1910, Carnegie Foundation for the Advancement of Teaching, p. 15.

overwhelming proportion of low-standard colleges did not force practitioners into these districts. The reasons are economic. No physician will stay in a community in which he can not make a living. Conditions in these rural communities, however, are gradually undergoing improvement. Through the advent of the telephone, the automobile, and improved roads, now commonly found even in rural districts, physicians in near-by cities have tripled or quadrupled the radius of their practice, and this has brought a more abundant and skilled medical care within the reach of rural communities. The average rural district perhaps has never had as adequate medical care as at the present time. Even where the contrary may be true, the providing of such service will not be brought about by the continuance of low-standard medical schools. If mining towns and sparsely settled districts, in which physicians can not ordinarily make a livelihood, are to obtain adequate medical service it will be necessary for salaried officers to be sent there, either by National or by State Governments. And the people in such communities will undoubtedly have better medical service if these officers have been trained in high-grade medical schools.

COEDUCATION IN MEDICINE.

During the past few years several of the larger medical schools have thrown open their doors to women, so that of the 95 medical schools, 67 are now coeducational. Over 40 years ago the University of Michigan admitted women students to its courses in medicine, and since that time 22 of the 29 State universities which have medical schools have done likewise. Johns Hopkins University medical department and Cornell University medical college have admitted women students since their organization, in 1893 and 1898, respectively. Rush Medical College, which in 1899 entered into a close affiliation with the University of Chicago, opened its doors to women in 1902. Following that time no similar action was taken by any prominent medical school until in 1914 the University of Pennsylvania voted in favor of coeducation. Like action was taken by Tulane University of New Orleans in 1915 and by Columbia and Yale during the present year. There remain 28 medical schools, including the medical departments of 7 State universities, which are not coeducational. Even with these increased opportunities, however, the percentage of women medical students is not increasing and the proportion of women students in coeducational colleges remains about the same. Since 1904 the proportion of all medical students who were women has fluctuated between 3.2 per cent and 4.3 per cent, and the percentage in coeducational colleges has ranged from 77.4 per cent to 83.8 per cent. During the last year just 4 per cent

of all medical students were women, and of these 82 per cent were in 51 coeducational schools. Incidentally, 16 medical colleges which have at various times admitted women had none enrolled during the last session.

FUNDS FOR MEDICAL RESEARCH.

Several large sums have been given during the year for medical research. The University of Pennsylvania school of medicine received \$150,000 by the will of Dr. J. William White to establish and permanently endow a professorship in surgical research. Columbia University College of Physicians and Surgeons received \$100,000 from the executors of the estate of the late William C. Bondy as an endowment fund for medical research, chiefly in regard to cancer. Harvard University received \$100,000 for medical research, \$75,000 of which was by the will of Morrill Wyman and \$25,000 by the will of William Endicott. Johns Hopkins Hospital received a gift of \$150,000 by the will of Miss Jessie Gillender, part of which is to be used for research into the cause, prevention, and cure of epilepsy.

Recommendation has been made that a fund of more than \$3,000,000 for the treatment of cancerous, nervous, and disabling ailments be given to the University of Pennsylvania Hospital. The fund is the estate and its increment willed for the purpose by Anna T. Jeanes, a noted Friend philanthropist, who died in 1908. The recommendation was made by Dr. Winford H. Smith, superintendent of the Johns Hopkins Hospital, Baltimore, who was selected by the trustees of the fund to come to Philadelphia, make a survey of its hospitals, and give them his opinion as to where the fortune would work the greatest benefit.

MEDICAL ACHIEVEMENTS OF THE YEAR.

Three achievements of the year in the field of bacteriology and preventive medicine which stand to the credit of American physicians are worthy of special comment. The first was the establishing of the bacterial origin of typhus fever. This was through the work of Drs. Plotz, Olitzky, and Baehr, of the Mount Sinai Hospital, New York city, who proved that the specific etiological factor of typhus fever is an anaërobic bacillus known as the *bacillus typhi exanthematici*, first described by Plotz in 1914. The definite knowledge regarding the germ origin of typhus was timely, since the increased prevalence of the disease in Austria, Russia, and Serbia has furnished the opportunity, of which Plotz has taken advantage, for trying out a vaccine and other methods for its prevention or cure. As reported last year, the fact that typhus fever was transmitted by

insects, such as the body louse and other vermin, had already been proved through the work of four American physicians—Anderson, Goldberger, Ricketts, and Wilder.

The second achievement was the checking of the most severe epidemic of typhus fever in modern times, which was raging in Serbia early in 1915. The epidemic began in January, 1915, among some Austrian prisoners and spread rapidly from them to other individuals. The country, weakened by war, was not prepared for the terrible and widespread epidemic which resulted. No systematic effort was made to check the disease until in the latter part of March, when a group of American physicians, under the direction of Richard P. Strong, of Harvard University, was sent to Serbia by the American Red Cross Sanitary Commission. The epidemic increased through January, rose more rapidly in February and March, and reached its height in April, when about 9,000 cases were reported each day. Through the vigorous efforts of these outside voluntary workers, and with the cooperation of Serbian physicians and officials, the epidemic was soon under control and within a few months no new cases of typhus were reported. Meanwhile, besides those going to Serbia, several groups of physicians, organized in what are known as "hospital units," each unit accompanied by a corps of nurses, have been sent by some of the American medical schools to help care for the sick and wounded in the European war.

The third achievement, though less dramatic than the one just described, was of no less importance. It was the success in preventing the spread of an epidemic of the plague in New Orleans. The disease appeared in that city in the latter part of 1915, and its spread was prevented by the prompt action of the United States Public Health Service, assisted by the local health officers. The spread of the disease was checked by the fumigation of vessels with carbon monoxide or with hydrocyanic acid gas, by the spraying of buildings, and by a campaign for the extermination of rats. A report¹ states that 94,307 buildings were rendered rat proof, that 490,022 rats were trapped, and that on examination of the majority of these, 265 were found to have rodent plague. No other cases of human plague developed, and no further evidence of the disease among rodents has been found since November 6, 1915.

The success in checking epidemics of typhus fever and the plague are excellent illustrations of the great good resulting from the present-day knowledge of medicine secured since the discovery of the germ origin of many diseases referred to in last year's report. They are illustrations also of the excellent service to the public which can be rendered by physicians who have secured their training in

¹ American Year Book, 1915, p. 705.

high-grade medical schools where the latest methods of recognizing and preventing diseases are taught. The improvements in medical schools during the last 12 to 15 years are resulting in the graduation of larger numbers of physicians who are capable of performing such highly important services in public-health work.

GRADUATE COURSES IN PUBLIC HEALTH.

Graduate courses in public health have been established in connection with 10 medical schools, the first of which was established at the University of Pennsylvania in 1909. The Rockefeller Foundation has provided funds for the establishing of a school of hygiene and public health in connection with the medical department of Johns Hopkins University. Dr. William H. Welch was appointed as director of the school and Dr. William H. Howell as head of the physiological department. A site is to be purchased and a suitable building erected, provided with laboratories and departments needed in such a school, including those of sanitary chemistry, physiology, bacteriology, protozoology, epidemiology, industrial hygiene, vital statistics, museum, library, etc. About a year will be required for the erection of the building, the securing of equipment, and the gathering together of a suitable staff of teachers. It is expected that the school will be opened in October, 1917. The following table summarizes the data for the schools in public health in nine other medical schools:

Graduate courses in public health.

Name of college.	Degrees in health.	Course began.	Years in course.	Instructors.	Total fees.	Thesis required.	Prerequisite college work required.	Total number of degrees granted.
University of California Medical School.	Cert. P. H.	1914	1	30	\$150	Yes.	R. L. or B. S.	2
Do.	M. A. (P. H.)	1915	1	30	150	Yes.	A. B., or B. S.	1
Do.	Gr. P. H.	1915	2	30	300	Yes.	A. B., B. S., or M. D.	5
University of Colorado School of Medicine.	Cert. P. H.	1913	(¹)	20			M. D.	
Do.	M. S. (San. Eng.)	1913	1	20	50	Yes.	B. S. (Eng.)	1
Do.	M. S. (P. H.)	1913	1	20	50	Yes.	A. B., or B. S.	
Do.	Dr. P. H.	1913	2	20	100	Yes.	A. B., B. S., or M. D.	
Tulane University College of Medicine.	do.	1912	1	16	205	Yes.	M. D.	4
Do.	Cert. P. H.	1912	3	16	85	Yes.	do.	(²)
Harvard University Medical School	Dr. P. H.	1910	1	39	150	Yes.	A. B. and San. Eng., or M. D.	13
Do.	Cert. P. H.	1912	1	59	250		San. Eng. and M. D.	13
University of Michigan Medical School.	M. S. (P. H.)	1913	1	67	67	Yes.	A. B., or B. S. and M. D.	6
Do.	Dr. P. H.	1913	2	7	154	Yes.	do.	2
Detroit College of Medicine and Surgery.	M. P. H.	1913	1	11	50		M. D.	2
University and Bellevue Hospital Medical College.	Cert. P. H.	1914	(³)	35	50		do.	
Do.	Dr. P. H.	1914	1	35	205	Yes.	do.	
University of Pennsylvania School of Medicine.	C. S.	1909	1	14	150	Yes.	do.	26
Do.	C. S.	1909	1	14	150	Yes.	A. B. or B. S.	2
University of Wisconsin Medical School.	Dr. P. H.	1911		8	350	Yes.	M. D.	2
Do.	M. P. H.	1911	1	8	175	Yes.	do.	4

¹ This is a course for practicing physicians, covering 6 weeks in each of 4 years, a total of 24 weeks.² Many.³ 6 weeks.

GRADUATE MEDICAL INSTRUCTION AT HOME.

A large proportion of the physicians in the United States for financial reasons, or from the nature of their practice, find it impossible to leave their homes for even a few weeks, or months, and to pay the enormous expense necessary to obtain graduate medical instruction abroad or in distant cities. Many of these physicians would be glad to improve their skill, if such instruction could be made accessible to them. Efforts to meet this need are now being made in several States. The medical society of the State of Pennsylvania was apparently the first State association to establish graduate instruction in county medical societies. Many physicians well qualified as teachers were found who were willing to conduct clinics and discuss medical topics before such societies if their traveling expenses were paid. This plan was successful for a number of years and would doubtless have continued so, if adequate supervision of it had been maintained by the State society. Another plan was adopted about two years ago by the committee on postgraduate instruction of the State medical society of Maryland. Among the younger members of the faculties in the local medical schools, a number were found who were eminently qualified to give graduate medical instruction and who could be spared from their duties at certain periods of the year. The offer was made to send one or two of these men to give courses of lectures and clinics to county societies desiring them, the only charge made being for transportation and entertainment. In 1915 the plan was tried at Hagerstown, and so much interest was aroused that this year the committee planned to establish 10 or 12 such courses. In Michigan during the past year the development of a public health measure has resulted in bringing graduate medical instruction to the local physicians. The State board of health established clinics throughout the State for the examination of patients suspected of having tuberculosis. Specially qualified clinicians selected by the board were placed in charge of these clinics, who, in addition to examining the patients and instructing them how to live, demonstrated to local physicians the later and more efficient methods of examination and diagnosis. In Ohio a committee of the State medical association adopted a plan quite similar to the one in Maryland, whereby teachers from the local medical schools were sent out to give lectures and demonstrations on special subjects to physicians in small cities and towns.

The latest plan for bringing graduate medical instruction to the physicians has been established in North Carolina. Since June 5, 1916, classes of about 15 physicians in each have been held in six cities, under the auspices of the State board of health and the Uni-

versity of North Carolina, which were continued for 17 weeks. The instructor was in Raleigh on Monday and in Weldon, Tarboro, Wilson, Goldsboro, and Selma on the other five days of the week, respectively. The course was opened each day at 11 a. m.; it consisted of a lecture covering one hour and a clinic of two hours, and dealt with diseases of children. The instructor, a Boston physician, was a specialist on the subject. Another class was organized in the western part of the State, the instructor being a Chicago physician, who likewise gave lectures and clinics in children's diseases. The physicians enrolled paid fees sufficient to cover the expenses of the course. The clinics were supplied with patients by the physicians enrolled, and it is reported that sufficient valuable material was readily found.

A NATIONAL BOARD OF MEDICAL EXAMINERS.

For many years the need of a national board of medical examiners has been generally recognized by the medical profession. The licensing of physicians in this country from the beginning has rested with boards appointed under the authority of the 48 States and the District of Columbia, and there was need of some national qualification which would be worthy of acceptance in all States. A national body, with full legal powers, could not be established without securing an amendment to the National Constitution. It was evident, therefore, that the national board would have to be voluntary and that its certificate, to be of value, would need to be based on unquestionable qualifications. During the year such a voluntary national board of medical examiners has been organized, through action taken in 1915 by the late Dr. William L. Rodman, who was then president of the American Medical Association. Dr. Rodman was fortunate in securing from the Carnegie Foundation for the Advancement of Teaching a donation of funds generous enough to pay the running expenses of the board for several years. The personnel of the membership of the board originally selected was as follows:

Admiral W. C. Braisted, Surgeon General, United States Navy, president; Commander E. R. Stitt, United States Navy; Gen. W. C. Gorgas, representing the United States Army; Col. L. A. La Garde, treasurer, representing the United States Army; Surg.-Gen. Rupert Blue, representing the Public Health Service; Asst. Surg.-Gen. W. C. Rucker, representing the Public Health Service; Herbert Harlan, representing the Federation of State Medical Boards; Isadore Dyer, New Orleans; Victor C. Vaughan, Ann Arbor, Mich.; Henry Sewell, Denver; Louis B. Wilson, Rochester, Minn.; E. Wyllys Andrews, Chicago; Horace D. Arnold, Boston; Austin Flint, Jr., New York; and William L. Rodman, secretary, Philadelphia.

The vacancy caused by the death of Dr. Rodman was filled last June by the appointment of Dr. Walter L. Bierring, president of the Iowa State board of medical examiners.

The board, therefore, is at present composed of six representatives from the Government medical services (two each from the United States Army, Navy, and Public Health Service), two members (hereafter there are to be three) selected from members of State licensing boards, and seven (hereafter six) other physicians appointed at large. The Surgeon Generals of the Army, Navy, and Public Health Service will serve as long as they hold their respective offices. If not reappointed at the expiration of their terms, their places on the national board will be automatically filled by their successors.

At an early meeting of the board all other members were by lot divided into three groups of four members each, their terms being two, four, and six years, so that the terms of four members will expire every two years. Their successors will be appointed for a term of six years.

The board has adopted educational standards as high as the highest adopted by any State licensing board. Applicants who graduated in 1912 and thereafter will be required to have completed two years of work in an approved college of arts and sciences, or to have had an equivalent education, prior to entering on the study of medicine. The date for the first examination of the board was fixed for October 16, 1916, in the city of Washington.

The attainment of the object for which this board was organized depends on the acceptance of its certificate by the various State licensing boards. It is believed that when this board is once established its certificate will be a qualification worthy of acceptance in the selection of officers for the medical reserve corps of the Army and Navy to aid the Government in any national emergency. When fully established this board will also doubtless provide an avenue by which reciprocal relations in medical licensure may be arranged between this and other countries.

CHAPTER XI.

LEGAL EDUCATION.¹

By HENRY M. BATES,
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GROWTH OF LAW SCHOOLS.

The outstanding fact in legal education in this country during the past 25 years is the shift from the law office to the law school as the avenue of approach to the bar. This is shown both by the increase in the number of students in the law schools and by the increase in the number of schools themselves. In 1891 there were 96 schools, with a total attendance of 12,516 students. In 1916 there are, according to the reports of the United States Bureau of Education, 124 schools, with an aggregate attendance of 22,993 students.² The following is a summary of the statistics for the year ended June 30, 1916:

Law schools, 1915-16.

Number of law schools	124
Instructors	1, 531
Students (men, 22,306; women, 687)	22, 993
Students with college degrees	4, 451
Graduated in 1916	4, 323
Volumes in libraries	1, 164, 687
Value of grounds, buildings, equipment, etc.	\$5, 593, 740
Amount of permanent endowments or productive funds	\$2, 091, 592
Total receipts for the year	\$1, 500, 669

This increase in the number of institutions teaching law and in the number of students preparing for the bar in this way makes on the whole for improvement, but the ointment is not without its flies. The change has been brought about by a number of causes, chief of which is that the average law office has become a much less effective place than it formerly was for the purpose of instruction. It has been pointed out repeatedly that the successful lawyer of to-day is

¹ The Report for 1914, Vol. I, Ch. X, contained an analysis of conditions to which this review is supplementary. There was no chapter on legal education in the 1915 report.

² The Carnegie Foundation for the Advancement of Teaching, which is conducting an exhaustive study of legal education, reports 137 schools conferring degrees, 10 resident schools that do not confer degrees, and 17 correspondence schools. For list see end of chapter.

too busy to give anything like adequate time to the instruction of young men in his office. A second cause, resulting of course somewhat from the first, is that the American Bar Association and many State associations have recommended, and even urged, that young men going to the bar should seek their instruction in law schools.

Unfortunately some lawyers, and some persons who are not lawyers, have seen in this tendency and in this organized professional support of the law schools an opportunity to make money out of the functions of legal instruction. Thus it is that there are a large number of proprietary schools organized on a commercial basis, advertising extensively, frequently without any regard to the dictates of good taste or of ordinary honesty. It is only fair to add that there are some proprietary schools conducted by conscientious men and with as much adherence to the requirements of a sound educational policy as is possible within the limitations under which they necessarily work. Many high-minded lawyers give of their time and energy to the work of instruction in such schools, not infrequently for wholly inadequate compensation, and in some instances without any compensation at all. They are led to do this largely out of a desire to be helpful to young men seeking the profession to which they themselves have devoted their lives. Sometimes such men give really adequate instruction, but the instances of this are necessarily growing increasingly rare, for the work of legal instruction has become more and more a distinct profession, with an increasingly growing appreciation by practicing lawyers of the demands made upon the time, energy, and devotion of the really scientific law teacher. Men engaged in the active practice of law, especially if they are able and successful, have neither the time nor the energy left after the day's work in the practice of their profession to do the work absolutely necessary for developing the highest type of scholarship or for acquiring the technique of law teaching in its modern development. It is important, of course, that law teaching shall be in close contact with specific and practical needs of the profession; but, on the other hand, if law is to grow, if it is to become liberalized, and if it is to meet the wants of the changing community, it is extremely important that the function of legal education should be in the hands of men who are able to view law in something of a scientific and a philosophical spirit and with a consciousness of its evolutionary character.

For these reasons and others more obvious the proprietary city school can seldom give to its students a sense of the importance of making the law conform to changing conditions of society in performing its prime function of accomplishing justice. Despite the brilliant things that have been said about the difference between

law and justice, and conceding all that any rational person would claim as to the necessity of certainty and such permanence as may be possible in the rules of law, there are nevertheless overwhelming reasons why the endeavor should be to make law coincide with justice to the fullest possible extent.

MULTIPLICATION OF SCHOOLS.

It is with these thoughts in mind that one can not but deplore the growth of mushroom schools in the commercial centers. California, for example, has at least two excellent schools, amply equipped in every way to train all the lawyers the State can possibly need, except those who for one reason or another wish to go outside for their legal education. Nevertheless, according to the Carnegie Foundation study, there were in 1915 seven other schools in California, and the past year has witnessed the addition of still another to the list, its faculty being made up of men actively engaged in practice at the bar. The same situation in multiplication of schools subject to such limitations that they can not possibly do the best work is to be found in New York, Philadelphia, Chicago, and other large centers.

Frank speaking on this subject is unfortunate in that it is almost certain to give offense to high-minded, conscientious lawyers who are giving their time to instruction in such schools from motives altogether creditable to themselves. But the future of legal education and indirectly of the bar and of the great work which it is its duty to perform for the State make it a plain duty, however unpleasant, to insist upon a conscientious and open-eyed consideration of the situation.

Men like to speak of lawyers as officers of the court, and such they are in some sense and to a large extent, and in just that sense and to that extent they are public officers; and irrespective of their official status they are of course the most powerful single agency in making, declaring, and enforcing the principles of private law. Upon their intelligence, their knowledge of legal principle, and their real understanding of the function of law depends in no small degree the very future of the law itself. Furthermore, as judges, as legislators, and as administrators they affect powerfully the administration of law and the accomplishing of justice in the State. This being the case, it should be frankly recognized that the practice of law is not a matter of private right, but a privilege, and a privilege, moreover, which should be controlled by the public in the interest of the public alone. These considerations require that the matter of legal education should be looked at in the same light and controlled in the same way and for the same reasons. These purposes are so nearly self-evident, and they concern community interests so important, that it is amazing that

their force should not be recognized by the public in an insistence that legal education and admission to the bar should be regarded as wholly without the scope of mere private right or enterprise. A man should no more be permitted to practice law merely because it would be for him a gainful occupation, or because for other reasons he wishes to, than a man should be permitted to become a judge or legislator for the same reasons. With almost as much truth it may be said that the function of legal education should not be confided to persons or institutions merely because the exercise of the function may be profitable or agreeable to such persons or institutions. The State, in this matter, should insist only upon the best available methods and instruments of legal education, and should not tolerate the suggestion that it be satisfied with instrumentalities and methods which may perhaps suffice to give a man a smattering of the law or even to enable him to pass examinations for the bar. This last assertion is made with confidence, because with the means at hand and with the time and other limitations under which boards of law examiners must act under present conditions, the bar examination, however valuable, can not answer as the sole means of determining a candidate's qualifications for practicing law.

IMPROVEMENT IN REGULATIONS.

It is gratifying to note important advances made in public opinion regarding these matters, and in some cases the actual effectuation of that improved public opinion. In New York, Illinois, Michigan, Kansas, and other States steady improvement in the regulations for admission to the bar have been made during the past three or four years, and even a cursory examination of the questions asked upon examination for admission will show how these questions are improving in many States.

In Ohio the matter of admission to the bar has been in the hands of the supreme court, which acts through a board of examiners that has been steadily improving the type of its questions and the method of marking answers. The Ohio State bar association at its annual meeting in July unanimously adopted a resolution recommending that four years of law study instead of the prevailing three be required of all candidates for admission to the bar, except those who are college graduates. In Michigan a law passed in 1913 has this year for the first time become fully operative. This law has repealed the old statute exempting the graduates of law schools of the State from the State examination. All candidates for admission to the bar are now required to take these examinations, which are given by a competent and conscientious board of five examiners.

POLICIES AND METHODS.

The past two years have witnessed no radical changes in the law school curriculum or in policies or methods. The case method of instruction has been fully vindicated and is now the principal method in a large majority of the law schools. But no adherent of the case method, however devoted to it he may be, believes that it contains the last word on the subject of legal education. Changes in general education, shifting industrial, commercial, and social conditions and the gradual rise of new types of law business will necessarily bring about modifications in present methods of legal instruction. There are now so many good law schools in the country, and there is among them such generous rivalry to attain high efficiency and usefulness, that there need be no fear that modifications will not come rapidly enough. Indeed, there may be some danger that experiments and changes will be tried too freely and without sufficient consideration of the fundamental functions involved. There can be little doubt that the law schools of the country have reached a measure of efficiency beyond that of many other institutions of university or college rank. This is due in large measure to forces and conditions for which college teachers are not to blame and for which the law-school teachers can claim no credit. In the first place, the function of the law school is narrower and simpler, and however important it may be, the field of law-school endeavor is much smaller than that of the college. It is very much easier, too, for the law faculty to get serious, hard work from its students than for the college professor to obtain the same result from college boys. The law student is older; moreover, the law student feels that he is forging the very instruments with which he is to make his living, whereas the college student is altogether too apt to think that his work is lacking in practical value.

CURRICULUM PROBLEMS.

One thing the law school has done—it has “stuck to its last.” It has recognized that it had a definite and important function to perform. It has insisted that that function be performed only in the best possible way, all conditions being taken into account. It has felt that to wander from the main highway of legal instruction into the by-paths of matters of relative insignificance or only collateral to law would be to impair the efficiency of its work. It has, moreover, insisted in the main that only such subjects should be taught as were susceptible of treatment with sound pedagogical methods.

For these reasons the law school of to-day excludes from its curriculum subjects which it may be well for the lawyer to know something of, but which are not immediately and necessarily constituent

elements of the law. It has not felt that it could or should teach sociology, political economy, or philosophy. And it has pretty steadily refused to include among its courses any which, because of the character of the available material for teaching, could not be the basis of intensive preparation by the student and then of free discussion between instructor and class in the classroom. The law-school teacher who discusses with his class problems upon which they have spent hours of time before the class meeting, who knows what they are thinking, who sees their difficulties, who becomes acquainted with them while they are becoming acquainted with him, who reads and marks all of his examination papers, is by these very facts compelled to keep fresh upon the subject matter of the course, to adapt his instruction in all respects to the needs and capacities of his students, and with each passing year to become more familiar not only with the subject but with the best method of handling it and with inspiring his students to real thinking.

But the law school has maintained its sound position despite temptations to depart from it—temptations that are growing in number and in intensity of appeal. The insistent demand to “liberalize the law” is not unnaturally accompanied by efforts to introduce liberal and cultural elements, so called, into law-school instruction. Herein lies a danger which needs to be sedulously guarded against. As the case stands to-day the law student in a three-year course can cover only from perhaps 60 to 80 per cent of those subjects that are universally regarded as of importance to the general practitioner and as susceptible of the best educational use. To include in the undergraduate curriculum, then, philosophical, economic, or social subjects would be to exclude an equivalent amount of pure legal study. This certainly can not be done to any considerable extent without seriously restricting the student’s study of general law subjects in which he ought to have careful training, and without impairing his subsequent efficiency as a lawyer. It is for this, among other reasons, that the law school ought to, and the better schools actually do, insist that as much of these and other liberal subjects as possible shall have been pursued by the student in school or college. It is this, among other reasons, which makes a complete college course highly desirable, if not necessary, for any student who hopes to become a broad-minded, successful practitioner at the bar under modern conditions. The three-year period is all too short for the law school to do for the student what should be done in preparing him for the actual practice of his profession. It would seem, then, that the law school must recognize that there should be a division of functions, and that to the college and the graduate school should be confided the work of infusing the spirit and the content of a liberal culture into the prospective lawyer’s mind.

There is doubtless a place in the undergraduate curriculum in law for the elements of such subjects as Roman law, jurisprudence, international law, and the theory of legislation; but it is doubtful if the average student should be allowed to do much even in these fields as an undergraduate in the law school.

What can be done and what ought to be done is for the law faculty to become so saturated with the principles of jurisprudence, the philosophy of law, and the economic and social content of law that it will, in imparting instruction in strictly legal subjects, give to the student an enlightened view of the principles of the great subject which he is to practice, and will send him out with a forward, progressive spirit, with an understanding of the underlying philosophic problems involved in any legal system. A few students—those with broad, general education and with minds capable of grasping philosophical conceptions—should then be influenced to continue their studies in graduate schools in order that there may be a constant supply of men qualified in mind, spirit, and knowledge to become real jurists, the leaders in legal thought and legal instruction of the future.

It may be objected that if, in courses upon particular subjects, anything but the rule of law is taught there will be a blurring of the student's knowledge and understanding of the legal principle. It hardly seems as though this is at all a necessary result. For example, if in torts the topics of liability of the employer for injury received by the employee in the course of his employment, or of contributory negligence, or in constitutional law the matter of "due process," are discussed in the classrooms solely with reference to the law as it has already been declared, a great majority of students are likely to emerge with a purely legalistic conception of law. On the other hand, if, when these topics are reached and the law as it is has been carefully discussed and criticized, it is pointed out how the fellow-servant doctrine and that of contributory negligence, or an early nineteenth-century view of due process of law, no longer meet the requirements of a growing and highly complex society, it is submitted that the student will have an even clearer understanding of the law as it is, and that he will go to the bar with a forward and progressive spirit which will contribute its mite to intelligent reform. Similarly throughout the curriculum: if the faculty is itself saturated with jurisprudence and is reading and reflecting upon the philosophy of law, it will be able to interest the students in the nature of law and in the light which the study of jurisprudence and justice philosophy throw upon any given system of positive law. Anything like exhaustive or comprehensive study of jurisprudence, juristic philosophy, or even comparative studies of law ought to be reserved, generally speaking, for graduate work.

The faculties are still groping for some suitable material and some proper method with which to give instruction in the elements of law, as suggested by Prof. Josef Redlich in his report to the Carnegie Foundation upon the case method of instruction. By this is not meant the old-fashioned course in "elementary law." This problem was discussed at the 1915 meeting of the Association of American Law Schools held in Chicago, and two interesting papers upon the recommendation of Prof. Redlich, one by Dean Stone, of Columbia, and one by Dean Woodward, then of Leland Stanford, were read. It may fairly be said that while unquestionably a study of the real elements of law in a scientific sense would be valuable, yet, as the Anglo-American law has never yet been stated in "elements" in the sense in which Prof. Redlich used the term, it is impossible to teach it in that way. Nevertheless some interesting efforts to meet what is undoubtedly to some extent a defect in legal education are receiving consideration. Courses of one kind or another in the elements or principles of law are given at California, Chicago, Leland Stanford, and Northwestern. Courses which are in some degree comparative studies of law are offered at California, Leland Stanford, and Northwestern in the undergraduate curricula, and at Harvard and the University of Michigan in the graduate courses. Special and more narrowly limited comparative studies, as, for example, upon commercial law, procedure and legislation, are offered in one or more of the schools already named.

Other interesting developments of the past year or two in law-school curricula would include the course in criminal law, criminology, and penology offered at the University of California in the summer session of 1916, and the advanced courses in procedure based upon studies of the reformed procedure of England and several of the States as offered at Harvard and the University of Michigan.

THE CARNEGIE STUDY OF LEGAL EDUCATION.

As part of its study of legal education the division of educational inquiry of the Carnegie Foundation for the Advancement of Teaching published a list of law schools in the annual report of the foundation for 1915.¹ It is claimed for this list that it is "the most authoritative list of law schools ever published in the United States, at least since the growth of these schools reached its modern efflorescence." The list was purposely made to include all schools actually "alive," so far as could be ascertained. For this reason it contains, under the heading of resident institutions, a number of schools that have for one reason or another been eliminated from

¹ Also printed separately.

Bureau of Education lists. The institutions starred are not carried in the statistics of the bureau for 1915-16.¹

RESIDENT SCHOOLS CONFERRING DEGREES (137).

ALABAMA:

Tuscaloosa.—University of Alabama, School of Law.

ARKANSAS:

Little Rock.—Arkansas Law School.

CALIFORNIA:

Berkeley.—University of California, School of Jurisprudence.

Los Angeles.—University of Southern California, College of Law; Southwestern University, Law School.

Oakland.—*Oakland College of Law.

San Francisco.—Hastings College of the Law; St. Ignatius University, Law Department; San Francisco Law School; San Francisco Y. M. C. A., Evening Law College.

Santa Clara.—University of Santa Clara, Institute of Law.

Stanford University.—Leland Stanford, Junior, University, Law School.

COLORADO:

Boulder.—University of Colorado, School of Law.

Denver.—University of Denver, School of Law; Westminster College, School of Law.

CONNECTICUT:

New Haven.—Yale University, Department of Law.

DISTRICT OF COLUMBIA:

Washington.—Catholic University of America, School of Law; Georgetown University, School of Law; George Washington University, Law School; Howard University, School of Law (colored); National University, Law School; *Oriental University, Law School; *Potomac University, Law School; Washington College of Law.

FLORIDA:

De Land.—John B. Stetson University, College of Law.

Gainesville.—University of Florida, College of Law.

GEORGIA:

Athens.—University of Georgia, Law Department.

Atlanta.—Atlanta Law School.

Macon.—Mercer University, Law School.

IDAHOO:

Moscow.—University of Idaho, College of Law (Idaho Law School).

ILLINOIS:

Bloomington.—Illinois Wesleyan University, College of Law.

Chicago.—Chicago Law School; Chicago-Kent College of Law; De Paul University, College of Law (Illinois College of Law); Hamilton College of Law; John Marshall Law School; Loyola University, Department of Law; Northwestern University, School of Law (Union College of Law); University of Chicago, Law School; *Webster College of Law.

Springfield.—*Lincoln College of Law.

Urbana.—University of Illinois, College of Law.

¹ Two schools included in bureau lists and not on the Carnegie list are: Chicago, Ill., Northern Illinois University, Law Department; Rio Piedras, Porto Rico, University of Porto Rico, College of Law.

INDIANA :

Angola.—*Tri-State College, School of Law.

Bloomington.—Indiana University, School of Law.

Danville.—Central Normal College, Law School.

Indianapolis.—Benjamin Harrison Law School; University of Indianapolis, Indiana Law School.

Muncie.—Muncie Normal Institute, Department of Law.

Notre Dame.—University of Notre Dame, College of Law.

Valparaiso.—Valparaiso University, Department of Law.

IOWA :

Des Moines.—Drake University, College of Law.

Iowa City.—State University of Iowa, College of Law.

KANSAS :

Lawrence.—University of Kansas, School of Law.

Topeka.—Washburn College, School Law.

KENTUCKY :

Lexington.—State University of Kentucky, College of Law.

Louisville.—Jefferson School of Law; State University Central Law School (colored); University of Louisville, Law Department.

LOUISIANA :

Baton Rouge.—Louisiana State University, Law School.

New Orleans.—Loyola University, Law Department; Tulane University, Department of Law.

MAINE :

Bangor.—University of Maine, College of Law.

MARYLAND :

Baltimore.—University of Maryland, Law School.

MASSACHUSETTS :

Boston.—Boston University, School of Law; Boston Y. M. C. A., Evening Law School; Suffolk Law School.

Cambridge.—Harvard University, Law School.

MICHIGAN :

Ann Arbor.—University of Michigan, Law School.

Detroit.—Detroit Technical Institute, Detroit College of Law; University of Detroit, Law School.

MINNESOTA :

Minneapolis.—Minnesota College of Law; * Northwestern College of Law; University of Minnesota, Law School.

St. Paul.—St. Paul College of Law.

MISSISSIPPI :

Millsaps.—Millsaps College, Millsaps Law School.

Oxford.—University of Mississippi, Department of Law.

MISSOURI :

Columbia.—University of Missouri, School of Law.

Kansas City.—Kansas City School of Law.

St. Louis.—* Benton College of Law; City College of Law and Finance; St. Louis University, Institute of Law; Washington University, Law School (St. Louis Law School).

MONTANA :

Missoula.—University of Montana, Department of Law.

NEBRASKA :

Lincoln.—University of Nebraska, College of Law.

Omaha.—Creighton University, College of Law; University of Omaha, Omaha Law School.

NEW JERSEY :

Newark.—New Jersey Law School.

NEW YORK :

Albany.—Albany Law School (Union University, Department of Law).

Buffalo.—University of Buffalo, Department of Law.

Ithaca.—Cornell University, College of Law.

New York City.—Brooklyn Law School (St. Lawrence University, Department of Law); Columbia University, School of Law; Fordham University, Law School; New York Law School; New York University, Law School.

Syracuse.—Syracuse University, College of Law.

NORTH CAROLINA :

Chapel Hill.—University of North Carolina, School of Law.

Durham.—Trinity College, Law School.

Wake Forest.—Wake Forest College, School of Law.

NORTH DAKOTA :

Grand Forks.—University of North Dakota, Law School.

OHIO :

Ada.—Ohio Northern University, College of Law.

Cincinnati.—Cincinnati Law School; Cincinnati Y. M. C. A., Night Law School.

Cleveland.—Cleveland Law School (Baldwin-Wallace College); Western Reserve University, Franklin Thomas Backus Law School.

Columbus.—Ohio State University, College of Law.

Toledo.—St. John's University, Department of Law; * Toledo University, College of Law.

OKLAHOMA :

Norman.—University of Oklahoma, School of Law.

OREGON :

Eugene.—University of Oregon, Law School.

Portland.—* Northwestern College of Law; * Oregon Law School; * Portland Law School.

Salem.—Willamette University, College of Law.

PENNSYLVANIA :

Carlisle.—Dickinson College, Dickinson School of Law.

Philadelphia.—Temple University, Department of Law; University of Pennsylvania, Law School.

Pittsburgh.—Duquesne University of the Holy Ghost, School of Law; University of Pittsburgh, Pittsburgh Law School.

SOUTH CAROLINA :

Columbia.—University of South Carolina, School of Law.

SOUTH DAKOTA :

Vermillion.—University of South Dakota, College of Law.

TENNESSEE :

Chattanooga.—Chattanooga College of Law.

Knoxville.—University of Tennessee, College of Law.

Lebanon.—Cumberland University, Law School.

Memphis.—* University of Memphis, Law School.

Nashville.—Vanderbilt University, Law School; * Walden University, Law Department (colored).

TEXAS :

Austin.—University of Texas, Department of Law.

UTAH :

Salt Lake City.—University of Utah, School of Law.

VIRGINIA :

Charlottesville.—University of Virginia, Department of Law.

Lexington.—Washington and Lee University, School of Law.

Richmond.—Richmond College, Law School.

WASHINGTON :

Seattle.—University of Washington, School of Law.

Spokane.—Gonzaga University, Department of Law.

Tacoma.—* Tacoma School of Law.

WEST VIRGINIA :

Morgantown.—West Virginia University, College of Law.

WISCONSIN :

Madison.—University of Wisconsin, Law School.

Milwaukee.—Marquette University, College of Law.

RESIDENT SCHOOLS NOT CONFERRING DEGREES (10).

CALIFORNIA :

San Diego.—* San Diego School of Law; * San Diego Law School.

San Francisco.—* Kent Law School.

MASSACHUSETTS :

Boston.—Portia School of Law.

Cambridge.—* Cambridge Law School for Women.

OHIO :

Columbus.—* Columbus Evening Law School.

Youngstown.—* Youngstown Y. M. C. A., School of Law.

TEXAS :

Dallas.—* Dallas Law School.

Houston.—* Houston Y. M. C. A., Night Law School.

VIRGINIA :

Norfolk.—* Norfolk Y. M. C. A., School of Law.

CORRESPONDENCE SCHOOLS (17).

CALIFORNIA :

Los Angeles.—* American Extension University, Department of Law.

San Francisco.—* Modern School of Business and Correspondence, Course in General Law.

DISTRICT OF COLUMBIA :

Washington.—*¹ Oriental University, Law School; *¹ Potomac University, Law School.

ILLINOIS :

Chicago.—* American Correspondence School of Law; * American School of Correspondence, Department of Law; * Blackstone Institute; * Chicago Correspondence School of Law; ¹ Hamilton College of Law, Correspondence Department; * La Salle Extension University, Department of Law; * McKinley University, College of Law (Standard College of Law); * National Correspondence School of Law.

INDIANA :

Indianapolis.—* National Correspondence School of Law.

IOWA :

Oskaloosa.—* Oskaloosa College, School of Law.

MINNESOTA :

Minneapolis.—* University Extension Society, Department of Law.

NEW YORK :

New York.—* National Eclectic Institute, School of Law.

OHIO :

Rogers.—* Carnegie College, Law Department.

¹ "Also offer residence work." [Carnegie Report.]

CHAPTER XII.

ENGINEERING EDUCATION.

By C. R. MANN,

Carnegie Foundation for the Advancement of Teaching.

Engineering education is a thoroughly modern venture. The rapid industrial development during the last half century drove men to accept for the future engineer whatever training could be had at the moment, without waiting for the slow development of centuries, which has shaped the educational methods for the older professions. Hence the engineering schools were organized and controlled by men who had derived their ideas of the proper methods of professional training from inherited or acquired experiences in teaching the three old "learned professions." Practicing engineers have seldom been placed at the head of engineering schools, although instruction in law, in medicine, and in theology has always been controlled by the leading practitioners in those professions.

This is not so surprising when it is noted that everyone has a clear idea of what a doctor, a lawyer, or a minister is, but is at a loss to say what an engineer is. Tredgold's definition, written in 1828, that the engineer is one who "directs the great sources of power in nature for the use and convenience of man" is no longer adequate. The successful engineer to-day must direct the powers of men as well as the powers of nature; and the work must be done at a minimum cost. Therefore, to be successful, the engineering schools must determine what characteristics are essential to the men who can do these things, and what educational methods contribute most to the development of these characteristics.

The problem was stated in this form by A. M. Wellington in a series of articles in the *Engineering News* in 1892. He says: "The aim of every professional school is to train men to succeed in that profession and to dwell most on those things most needful to success. It has no other purpose or function as such."

The following year, when the international congress was held at the World's Fair, the division on engineering education organized permanently as the Society for the Promotion of Engineering Education. At that time, engineering education seemed a rather simple

problem, for Wellington's statement of the case was not yet understood. One of the "engineering educators" at that first meeting described "the ideal engineering education" with the utmost assurance. But in time, after a number of excellent committee reports had been presented and discussed at the meetings, it became more and more clear that the training of engineers is an even more perplexing and difficult task than is that of training lawyers, doctors, and ministers. As a result, the society, in 1907, appointed a committee to make a comprehensive study of the whole problem.

This committee soon found that it needed the help of practicing engineers. Therefore, the national engineering societies were invited to cooperate in the study, and the joint committee on engineering education began its work in 1908. The membership of this committee is as follows: Desmond FitzGerald (chairman); Onward Bates and Daniel W. Mead, of the American Society of Civil Engineers; Henry M. Howe and John Hays Hammond, of the American Institute of Mining Engineers; F. H. Clark and Fred J. Miller, of the American Society of Mechanical Engineers; Charles F. Scott and Samuel Sheldon, of the American Institute of Electrical Engineers; Clifford Richardson and Henry P. Talbot, of the American Chemical Society; J. R. Withrow, of the American Institute of Chemical Engineers; and C. L. Crandall, Dugald C. Jackson, and Gardner C. Anthony, of the Society for the Promotion of Engineering Education.

This new committee, however, soon discovered that the work would require more time than any one member could devote to it. Consequently, the committee in 1914 asked the Carnegie Foundation for the Advancement of Teaching to undertake such a study with them. This study is now in progress and will be completed sometime early in 1917.¹

Since the fundamental purpose of every professional school is to train men to succeed in the profession, the first problem for every such school is to determine what factors make for success. Accordingly, the Carnegie Foundation sent a circular letter to practicing engineers asking what characteristics were most needful for success in engineering. The result of this inquiry showed that, in the opinion of the 7,000 engineers who replied, such personal attributes as character, integrity, responsibility, initiative, judgment, common sense, efficiency, thoroughness, industry, and understanding of men have a weight of 75 per cent in determining the success of an engineer, while knowledge of his subject and of the technique of practice and of business constitute the other 25 per cent.

Inasmuch as college methods of instruction have been developed mainly for the purpose of imparting knowledge of subject matter

¹ Copies of the report may be had by applying to the Carnegie Foundation, 576 Fifth Avenue, New York.

and have paid little conscious attention to the development of personal character, it is clear that progress in engineering education consists in devising methods of instruction which give a mastery of subject matter and at the same time develop in the student those personal attributes that make up three-quarters of the engineer's equipment for success. The solution of this problem can be found only by experiment. Therefore, a real insight into the progress of engineering education may best be obtained from a study of some of the educational experiments that are now being made for this purpose.

One of the most interesting experiments in developing engineers who shall possess the necessary factors for success is being made at the University of Cincinnati, under the direction of Dean Herman Schneider. In 1906 the engineering school entered into a cooperative arrangement with the industrial plants of the city whereby each student spends half his time at the university and the other half in actual engineering work. The students are divided into two groups, which alternate with each other in biweekly periods, so that the shop and the university are always full-manned. In this way the practice of engineering is taught under actual commercial conditions, while the science underlying the practice is taught in the university. The course is completed in 5 years of 11 months each, so that each student has 27 months of university instruction. Since the regular four-year course in other schools never gives more than 36 months of actual instruction, this plan merely substitutes 27 months of practical work for 9 months of the usual instruction.

This 27 months of practical work is controlled by the university and is so organized that the student progresses regularly from the cruder and rougher work to the more difficult and responsible positions. Thus a civil engineer will probably begin with pick and shovel as a member of a track gang repairing track. If he remains at railroad work, in course of time he will become foreman of the gang, working with the regular foreman. Before he is through with railroading he will have worked in the switch and signal department, on bridge work, on general engineering work in the engineering department, and on evaluation work. He will also have definite experience in ferro-concrete construction. He will learn the operation of regular trains and work trains; he will know how to place and operate the equipment for construction, calculate cuts and fills, and so on, all as a part of the regular work on a "real railroad."

When a student begins a new job he is given a set of "work observation sheets." These contain from 50 to 200 questions concerning the details of the job and direct the student to sources of information where he can find the answers. He is required to be prepared to answer these questions during the "coordination peri-

ods," which come two or three times a week while he is at the university. By the time he completes the work he has not only learned how to do it correctly, but has been made to work out many problems of machine design, and has learned that success depends on the accuracy with which all the details have been fitted together. Much of the information required can be obtained only from fellow workmen, with whom he must therefore keep on friendly terms. His shop time is therefore not consumed in merely becoming a competent operator of a machine, but is mainly occupied in gaining an understanding of the meaning of shop practices and in learning to know workmen.

Through the elimination of the "practice shop," the university is spared the expense of maintaining shops which are at best imitations of commercial shops and whose equipment soon becomes obsolete. The students also benefit financially, because the cooperating firms are glad to pay them regular wages for their shopwork; and this makes a college training possible for many students who possess the necessary qualifications, but who would otherwise be barred because of its expense. Thus the work that enables the boys to stay in college is also helping to educate them for their future careers.

Experience has also shown that this frequent change of occupation tends to keep the student mentally and physically vigorous and does not distract and scatter his attention.

The faculty, too, benefit by the constant contact of the students with the practical world. For while a class that is face to face with multitudinous practical questions soon comes to appreciate the value of sound theory, it will not permit the professor to feed it long on problems that are simply made up to be problems, or on thinking that merely leads to more thinking. In Cincinnati theory is taught for the sake of its use; and if at any time in his course a student is found unable to use some theory that he has studied, he may be sent back to repeat that special work. The mechanics teacher may "flunk" students in calculus, or the professor of machine design may "flunk" them in mechanics. Nothing is finally passed until the diploma is granted.

Such effects as these can not be secured without constant study of the problem as a teaching problem by the faculty in a spirit of sincere cooperation. The tradition of departmental autonomy is here entirely destroyed, and the faculty spends two hours every Saturday morning discussing not only the details of administration, but also the general aims and purposes of the course as a whole, and the practical contribution which each department can make to the entire result. This cooperative study of their school problem as a problem in teaching by a whole college faculty is by no means the least encouraging and suggestive part of the Cincinnati experiment.

The faculty at Cincinnati is not only studying its teaching problems in a scientific manner; it is also experimenting with a system of vocational guidance for its students. The idea on which this experiment is based is that a man is most efficient when his work gives him the greatest satisfaction, and he gets this satisfaction when he has found the job for which he has inborn talents. Therefore work should not be classified according to the materials or the product, but according to the human characteristics necessary for success in it. The students are also analyzed according to their inherent dispositions as settled or roving, directive or dependent, original or imitative, deliberate or impulsive, dynamic or static. The student is then guided into the type of job for which he seems to be temperamentally fitted.

Dean Schneider's experiment merits a more extended discussion than is possible here.¹ The idea of part-time schools and of cooperation between the schools and industry is not new. It was included in the original plan of the Rensselaer Polytechnic Institute. The important and original contribution which the Cincinnati experiment has made to educational practice lies in the fact that the practical work not only secures manual dexterity, but develops this motor skill under conditions that impel thought and an appreciation of social use. The Cincinnati plan thus creates an environment that contains the elements essential to normal healthy growth.

The cooperative system as it has been worked out at Cincinnati has served as an inspiration for other experiments of a similar nature both in technical schools and in high schools in various sections of the country. Since the fundamental principles of all of these are the same, it is not necessary to discuss their detailed differences. They have added force to the work of Dean Schneider by showing that the Cincinnati method does not depend for its success either on the locality or on the personality of the director, but rests upon its own intrinsic merits as a genuine advance in educational methods.

Besides the more general movements in which the college as a whole is concerned, there are a number of interesting experiments being made in various schools by individual instructors. Thus Prof. R. M. Bird is developing an effective method of teaching chemistry to freshmen at the University of Virginia. Before taking up teaching at the university, Prof. Bird worked for a number of years in an industrial plant. In this capacity he was impressed by the fact that young graduates who came to the factory to work never seemed to know how to attack a problem. They had not been taught to work on their own initiative and responsibility, but had carefully followed the directions given in their laboratory manuals and texts.

¹A detailed description of this experiment is given in Educ. Bul., 1916, No. 37, "The Cooperative System of Education," by C. W. Park.

They knew the atomic weights of the various elements and other such facts which are ready for use in any book on chemistry. But when they were confronted with the kind of problems that arise daily in practical work and that require real investigation rather than the mere verification of known results, they lacked the ability to find the proper avenue of approach to a solution. This lack of initiative and resourcefulness was a great handicap to their progress.

In Prof. Bird's course, therefore, the student is given, on the very first day, certain substances with which he is more or less familiar and discovers for himself means of identifying them through their physical and chemical properties. This is the method used throughout the course. Chemical facts and laws are gradually revealed through the solution and discussion of a series of problems such as these:

A solution of copper sulphate has been mixed with iron sulphate; from this solution prepare pure copper sulphate.

Starting with metallic copper, make copper sulphate.

Separate the copper from the silver in a United States dime.

Sympathetic ink is a solution of cobalt chloride; starting with the nitrate, prepare some of this.

By the second term the students are able to cope successfully with problems like these:

During an absence from home the servant permitted my water heater to become completely stopped up with the deposit from clear hard water (free from mud). I cleaned it out without taking it to pieces (only disconnecting the screw union of the inlet water pipe) and without injury to the iron heater or the iron pipe. How would you have accomplished this? Prove the value of your method experimentally.

A tobacco manufacturer had returned to him a very large quantity of chewing tobacco because it was too bitter to be used by the best class of customers. The trouble was located in the common salt used in the seasoning of the tobacco. What substances in the salt imparted the bitter taste?

Prof. Bird secures one of his best results by having pairs of students compete with one another in the manufacture of chemicals. Each pair must devise its own method and must charge up all costs, including their own time at 20 cents an hour. The competition with one another and with the market price introduces an element of sport which lends zest and reality to the work.

The essential point in Prof. Bird's experiment is that the problems which he gives are not merely made-up problems, but have in them some really unknown quantity which can be discovered only by making an experiment in the laboratory. Therefore the laboratory is for the freshman exactly what it is for the research scientist—a place to find out things that can not be found out elsewhere. This treatment fosters the growth of a genuine spirit of investigation in the freshman and strengthens his initiative and resourcefulness, besides

giving him a practical working knowledge of chemistry. It must, therefore, be a more efficient method of training men for research than the current method of storing their heads with information for several years before bringing them face to face with questions that can not be answered without investigation and experimentation.

Educationally, the force in this experiment is very much the same as that in the work of Dean Schneider. The student is eager to work at projects by which he acquires manipulative skill under conditions that compel thinking and an appreciation of social use. Such projects challenge his prowess, command his respect, and inspire him with a determination to succeed. They rivet his attention on the task in hand and occupy his mind out of working hours. As has been stated, these are the ideal conditions for free and normal growth.

Similar experiments are being made in a number of schools not only in chemistry, but also in mechanics, mathematics, shopwork, machine design, thermodynamics, bridge design, and other scientific and technical subjects. These differ from one another widely in detail and in the methods used to get the results; but they are essentially similar in purpose and principle. They are all trying to discover a method of presentation that will make the student really want to do the work while he is doing it. Inasmuch as the power of a school resides in the daily work in the classroom, these experiments open the way to progress toward the real end of education—greater freedom for the development of personal characteristics through work that seems to the student intrinsically worth while. Advance will be repaid as soon as more college professors have come to see that the scientific investigation of a teaching problem is at least as worthy an expenditure of research ability as is the study of one of the far less complicated problems of the organic or the inorganic world.

It is a striking fact that the study of teaching problems has as yet received little attention in institutions of college and university grade. The academic spirit seems to regard such innovations as dangerous intrusions, rather than as sources of new power. Even in engineering colleges such experiments are relatively rare, although schools like Wentworth Institute, Franklin Union, Lowell Institute, Pratt Institute, Drexel Institute, Lewis Institute, Hampton Institute, and Tuskegee Normal and Industrial Institute have long since discovered and made good use of the motivating power of real problems. The teachers in the secondary schools have pursued this study with real success for a number of years and have numerous live associations and journals devoted wholly to this end. The Society for the Promotion of Engineering Education and the Society of College Teachers of Education are the only organizations of college men whose avowed purpose is the study of the teaching problem. The anomaly of this condition is not obliterated when it is noted that

about half of all the college graduates in the country go into teaching, many of them without one hour of professional training.

Teaching of the sort that has been described makes its appeal to the student through his instinctive desire for the mastery of material things. In so far as the methods of treatment emphasize and illuminate the social uses of the materials discussed, their training value is general, broadening, and even cultural. These experiments therefore also contribute directly to the solution of the problem of making the engineer a man of broad outlook and wide human sympathy. There are, however, two other lines of experiment which aim to accomplish this result more directly, and which may therefore lead to practices that will have a far-reaching effect on technical education.

The first of these deals with the teaching of English. Realizing the distinction between having to say something and having something to say, some English teachers have sought to render the work in English in engineering schools more vital by allowing the students to select technical subjects for themes, thereby utilizing their professional interest to motivate the work. This is an obvious improvement over assigning to freshmen in engineering topics such as Socialism, The proper dress for girls on the campus, or The dates of Shakespeare's plays. It does not, however, tend to give the technical man that love of good reading which is so valuable an asset to him.

An experiment on a very different principle is being made by Prof. Frank Aydelotte, at the Massachusetts Institute of Technology. The assumptions on which this experiment rests are (1) that an engineer is first of all a man; (2) that literature interprets life; (3) that English is bigger and better than technical English. The first hour with a new class is usually spent in discussing with each student why he came to college and what he expects to get out of it. Many different view points are expressed. The problem of what a college is for is defined and the class is asked to read portions of Arnold's *Sweetness and Light*, or Newman's *Knowledge its Own End*, or Huxley's *Science and Culture*, and to be prepared to discuss them the next class hour. After two or three hours of discussion with intervening reading, each member of the class is asked to write out his own conclusions. Each of the resulting themes is criticized at a 15-minute personal conference with the author. Further discussion and further effort to make personal interpretations of writers like those mentioned or of Ruskin, Carlyle, and Wordsworth furnish ample material for much practice in composition.

The force in Prof. Aydelotte's method resides in its direct appeal to the human instincts. It snatches literature from the grasp of pedantic grammarians and restores it to its normal functions. Even a freshman is eager to construct for himself some philosophy of life, and welcomes the discovery of the riches of literature. Once he has

caught a glimpse of its meaning, he will never be able altogether to overlook it. As with the other experiments that have been described, the educational promise in Prof. Aydelotte's work lies in the fact that the student secures his technical skill under conditions that make thinking a necessity and involve an appreciation of social relations. Work of this sort fosters the growth of those personal characteristics that constitute three-quarters of the engineer's equipment for success. It furnishes another means of adding the development of character to the other products of classroom instruction.

The second experiment that is directly aimed at securing a broader outlook for engineers was begun at Yale by Prof. Joseph W. Roe, in 1907, and has since spread to a number of other engineering schools. The original object was to bring students while still in college into friendly contact with workmen and to develop among them a feeling of mutual confidence and good will. The work consists in (1) a study of welfare activities, and of living and working conditions in American industries; and (2) a definite attempt to render some useful service to workingmen in the city. This latter is done principally through teaching English to foreigners, although there are classes in other subjects, as first aid to the injured, shop mathematics, civics, etc. Classes are small, in order to insure the element of personal contact, and are given at the workmen's home, in box cars, stores, pool rooms, boarding houses, shops, or anywhere where the men can be reached. The work is done voluntarily, without pay, and is independent of the college curriculum.

This "industrial service work," as it has been called, under the guidance of the international committee of the Y. M. C. A., has spread rapidly until now some 4,000 students are enrolled in it in more than 150 colleges. It has become so important that a special secretary is required to conduct it. The response and interest that it has called forth from students have created a demand for instruction on the human problems with which the students through it come into vital contact. Hence, there has been issued by the secretary, Fred H. Rindge, the outline of a "Suggested College Course on the Human Side of Engineering." The topics treated are The Human Factor in Industry, The Evolution of the Individual Worker in Industry, Industrial Organizations, Human Factors in Production, Working Conditions, Living Conditions, Leisure Conditions, Vocational Guidance, Cooperative Organizations, Legislation on Industrial Questions, Industrial Betterment, Scientific Management, The Engineer's Responsibility for Service.

Industrial service differs from ordinary social welfare work in that the main object is not so much the benefit of the workman as the development of the student in widening his outlook, giving him

deeper insight into the social aspects and the human responsibilities and opportunities of the engineering profession.

For the past 50 years engineers have been absorbed in the work of inventing, constructing, and perfecting machinery and the material conveniences of life. A large field of usefulness along these lines will always remain open to them. But the methods of this work have now been standardized and reduced to a system. Every large plant has its designing department and even its research laboratory. Relatively little attention has as yet been given to the scientific study of problems of the organization and control of the forces of men. These problems of the conservation of human resources are as much engineering problems as are those of the conservation of material resources. The demand for creative work in this field of human engineering is daily becoming more insistent.

Again, American industry has developed in a land of abundant natural resources. It has always been protected by a tariff. This protected atmosphere of natural opulence has given strong incentive for the development of originality, initiative, and push. Every boy in America has felt that the opportunity to become President was open before him. There was, however, little incentive for economy of production. It was much easier to exploit the Indians or to persuade Congress to raise the tariff than it was to make a scientific study of production costs.

The increase in population and the waste of natural resources have now brought the United States under the operation of the law of diminishing returns. The problem of efficiency of production has been thrust upon us. This again is an engineering problem. It can not be solved here by merely copying the autocratic methods that have been used successfully elsewhere, but demands an American solution which shall insure efficiency without sacrificing individual spontaneity and initiative.

Progress in engineering education demands the recognition of these facts. It therefore involves (1) the modification of traditional methods of instruction in such a way that the mastery of facts and of manual skill will be secured under conditions that impel thought and an appreciation of social use; (2) the extension of its field to include industrial production and the organization of human machinery. The typical experiments that have been described show that a very hopeful beginning has already been made. The demand for these changes is so pressing that the schools must either make them quickly or give up all idea of holding a position at the head of the procession.

CHAPTER XIII.

COMMERCIAL EDUCATION.

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SUMMARY.

Reports from 31 cities of 100,000 population and over indicate the following situation with regard to secondary commercial schools:¹ First, respecting proportion of commercial pupils, it is apparent that from 10 to 60 per cent of all high-school pupils are enrolled in commercial courses. Boston and Milwaukee lead in the upper range, while Columbus, Dayton, Cleveland, and Cincinnati have lowest percentages. On the average, about one-third of all pupils in the cities reporting are in commercial courses. Since 1912, when a similar canvass was made, no noticeable changes of proportion are discernible.

High-school organization for conducting commercial education shows a tendency toward the separate school. Most of the cities reporting still maintain commercial courses in general (cosmopolitan) high schools. New York, Boston, Cleveland, San Francisco, Springfield, Worcester, Columbus, Portland (Oreg.), Washington, Syracuse, have special commercial high schools.

Segregation of the sexes in commercial education has made but little, if any, progress since 1912. Some cities, like Philadelphia and Louisville, conduct all high schools upon the principle of segregation, but usually the special commercial school is for both sexes. Boston and New York conduct segregated commercial high schools, but maintain mixed commercial classes in general high schools.

Not only are commercial pupils not segregated by sex, but they are usually not separated from other pupils while pursuing related academic work, such as English, foreign languages, and mathematics. The commercial pupil receives specialized instruction only in technical subjects, such as stenography, bookkeeping, and type-writing. While superintendents reply that commercial pupils do

¹ A questionnaire was sent by the Commissioner of Education to the superintendents of schools of cities of 100,000 population and over in the spring of 1916.

receive related academic work, they invariably state that this instruction is given in divisions made up of pupils with all sorts of objectives. It is a generally accepted principle in vocational education that subjects such as English, history, and mathematics should be closely related to the vocation taught, but commercial education in our country is conceived primarily as general education, and is administered chiefly from that viewpoint. Cities maintaining special commercial schools assert that academic work is closely related to the vocational aim of the schools.

The most noticeable extension of program in commercial education appears to be the incorporation of the subject of salesmanship. Since the inquiry of 1912 a considerable number of cities have undertaken the work. The following cities report the maintenance of courses, or the intention of beginning courses with the current school year, to wit, Albany, Boston, Chicago, Cincinnati, Cleveland, Columbus, Dayton, Louisville, Grand Rapids, Kansas City, Omaha, Paterson, Philadelphia, Richmond, San Francisco, Spokane, Toledo, Washington, Springfield.

NEED FOR CLEARER STATEMENT OF AIM.

The insistent demand that educators formulate clearer statements of aim for educational enterprises is a source of some embarrassment to those who stand as sponsors for commercial education. The cross fires of school practice and of business demands render the present situation uncomfortable, at least. There is apparently some incompatibility between a definition of aims in terms of business needs and in terms of school practice. As long as generalities were good currency in educational thought, the difficulties were not great. The college course in high schools prepared for college, the general courses for life, and the commercial course for business. Now comes the disconcerting analyst and demands that this general statement of aim be explained. Commercial education, in truth, has had no clearer recognition of aim than have other school curricula, and is consequently no better prepared to make clear statements anent its purposes and methods.

When commercial education was incorporated into public educational institutions the same procedure was adopted that is usual when any added function is undertaken. This procedure constitutes, as it were, a simple formula, somewhat as follows: Of the subjects decided upon as a curriculum approximately 50 per cent will be selected to give conventional culture and general information; then a group of about 25 per cent is chosen for what is considered related work; finally, a component of about 25 per cent technical, applied, or vocational work is added to complete the compound. The council

of commercial teachers of Boston describes the typical situation as follows:

Every secondary school in the city wherein commercial education is offered gives a general culture course in science, history, mathematics, English, and other languages, and in addition offers courses in commercial subjects. These latter may be divided into two groups: First, courses designed to liberalize the pupils' attitude toward business; and, secondly, those courses that issue in skill in clerical pursuits. Hence the education now given in commercial courses in this city's general schools is threefold: First, to enable a graduate to enter into the inheritance of all educated people and to understand the meaning of democracy, of citizenship, and of opportunity; second, to give him a professional point of view that will enable him to see his work in the light of the whole and lift it out of drudgery in an awakened spirit of service; third, to enable him to succeed in his first humble position.

This conception of commercial education in no way disturbs the equilibrium of the general high school, which is accustomed to apply the same formula to each new enterprise, and experiences no discomfort in the assimilating process. The one-time alien, commercial education, became immediately naturalized and even undistinguishable from the former citizens. In the present indictment of the whole Nation, commercial education stands charged with the same faults as do the other members. Commercial education, coming as it did, and had to come, has developed no distinct individuality. It is not a thing, it is a part of a thing. It is wrong, consequently, to make an indictment against commercial education as a deliberate offender. It is fairer to state that commercial education was as effective in the beginning as the conditions, the appreciations, and the realizations of the time permitted, and is as effective to-day, perhaps, as similar factors make possible. To summarize on this point, the commercial course, which is spoken of as a separate entity, is in reality quite generally not a distinctive curriculum. It is, on the contrary, almost invariably a collection of school subjects which might be classified as, first, general subjects, such as English, history, mathematics, foreign languages; second, more or less remotely related subjects, such as economics, commercial geography, business law; third, technical or vocational subjects, such as stenography and book-keeping. The general subjects absorb the greatest proportion of time—about 50 per cent. Even the special high schools of commerce are not so far removed from this situation as to be free from a similar characterization.

It is obviously impossible to discuss the aim of the course as a whole, since there is found, when honestly analyzed, no course as a whole. It is possible to believe that there should be immediately created complete commercial courses, with definite and proper aims. At present, however, one can only analyze the aims of the parts of the course which are directly intended to fit pupils for business.

The aims of the technical or vocational subjects of so-called commercial courses—bookkeeping, stenography, office practice—are by no means unsound. There is honest and earnest effort to make these technical subjects function in the specific abilities needed in business. The schools to-day know more definitely than formerly about business needs, and they are certain to be much better informed in the immediate future, due to the intelligent investigation commonly current. This receptive attitude on the part of commercial teachers gives promise of increasingly effective adjustment of technical subjects to business needs.

Commercial courses, if the term may be used somewhat loosely, have recognized four general needs for commercial employees:

1. General office work, including various operations under the head of bookkeeping.

2. Stenography, typewriting, and the operation of office machinery, such as the multigraph.

3. Secretarial work, including stenography and typewriting. The position of secretary assumes an ability to exercise a degree of discretion and responsibility not included under the second classification. Preparation for the secretarial function in business can hardly be attempted in the regular high-school course. Secretaries are usually trained in postgraduate courses or in college.

4. Salesmanship, including a knowledge of stock and its care, as well as service to the customer. This last subject is only beginning to be recognized as a proper function of commercial education.

The inadequacy of aim of commercial courses consists quite generally in the failure to analyze out into clear detail the subdivisions to be found in each of these general aims. For instance, bookkeeping is taught largely under the assumption that each pupil must exercise on entering a business position the function of a head bookkeeper. Bookkeeping pupils study the theory of bookkeeping with much detail and are led to develop rather highly the judgment faculties of the art. Since commonly the bookkeeping graduate begins in business as a "piecemaker," he needs to have at the beginning of his work speed and accuracy in processes rather automatic in character. His training in school has emphasized one aspect, namely, theory and power—deferred values—while his job emphasizes another phase, namely, speed and accuracy—immediate values. Our schools might profitably give more time to the emphasis of these immediate business values, though not neglecting the range of instruction intended to equip the pupil for ultimate leadership. Quite generally, following the example of industry, many jobs in business are becoming specialized. Business is seeking workers in specific terms such as entry clerks, operators of the multigraph, dictaphone, billing machine, and adding machine. The schools turn out stenographers

and bookkeepers with but slight acquaintance with special machines and almost no acquired speed and accuracy in the standard demands of business. While retaining much of the scope and the power values of business training, pupils should receive far more intensive practice in the unit demands of business. More training in speed and accuracy under the somewhat automatic conditions of real work will enable the student to adjust more quickly than at present.

Schools are at present poorly equipped with commercial machinery to meet the demands of modern business training. In many large high schools where commercial students are numerous there are but one or two special machines, where there should be a dozen or more. Indeed, it is quite probable that many commercial courses are conducted with no other commercial machines than typewriters. Filing devices, now the standard equipment in business houses, are just beginning to appear in the schoolroom, and in woefully inadequate amounts. There is needed immediately a formulation of standard commercial equipment for commercial schools, so many typewriters per hundred commercial pupils, so many multigraphs, dictaphones, adding machines, filing cabinets. Where there are now samples of special machines to be seen by the pupil and perhaps operated but once or twice, there is need for the amount of equipment to permit practice under the fair conditions that give the pupil a chance to make adequate preparation for operating processes.

TERMINOLOGY.

It has been suggested that there is need for giving attention to the terminology of commercial education, that present terms are too vague and misleading. It will be difficult to improve terminology until ideas of what it is intended to designate by terms become more clear; furthermore, the schools can hardly anticipate the practice of business in the creation of terms intended to indicate the subdivisions of labor being evolved in business houses. There is a confusion of terms in business at present. The term "clerk" is particularly indefinite as used in business and in census returns. Many persons are listed as "clerks" by the census whose work may consist in addressing envelopes, counting and checking slips, listing slips, or doing general office work. The term may, on the other hand, signify high-grade work found under civil-service regulations. Again the term is applied to sales persons, such as a grocery clerk or a dry goods clerk. Dr. David Snedden, formerly commissioner of education of Massachusetts, suggests the following terms as possible of being descriptive of definite functions in business houses: (1) Stenographer, stenographer-clerk, stenographer-bookkeeper, stenographer-bookkeeper-clerk; (2) general clerk, special clerk, office operative; (3) sales girl, salesman,

indoor salesman, field salesman, bookkeeper, accountant. The use of the term clerk in this suggestion seems more confusing than clarifying, however, and until there is some agreement it will be impossible to make progress toward better definitions.¹

The schools may more properly attempt to clarify the terminology respecting the functions of commercial education and the varieties of school enterprises aiming at commercial preparation; for example, such terms, suggested again by Dr. Snedden, as commercial education, vocational commercial education, general commercial education, commercial arts education, business education, clerical education, course, curriculum, program, schedule, salesmanship. These particular suggestions assume the existence of types of commercial education which apparently are nonexistent. There is, for instance, hardly any strictly vocational commercial education; again, "commercial arts education" would convey but little significance to those engaged in the conduct of commercial courses. There will be necessitated some general agreement on the adoption of any terms, but there is every reason why agreements should now be sought, at least, with respect to the terminology originating within the schools and descriptive of the purposes of the school.

The chief means of giving commercial education in the United States is found in the commercial course in general or cosmopolitan high-schools. Economy is perhaps the main reason for this fact. Only in larger cities are there found several high-schools, so that most of our 500 communities of 10,000 population and over must attempt general as well as specialized instruction in but one high-school organization. Economy is not the only reason, however. Availability and convenience for pupils have caused many of the larger cities to adopt a system of cosmopolitan high-schools as the means of meeting the need for both general and special high-school education. Again, many communities, both large and small, are opposed to the theory underlying separate and special high-schools. These communities believe that there is involved in the plan a social loss, in that divisive and undemocratic influences are set at work when the students with one vocational aim are segregated into separate institutions.

Commercial courses in general high-schools, as has been indicated, are not what the name signifies, but are, rather, certain proportions of general subjects combined with related and vocational subjects. The usual proportion of time allotted to the three groups of subjects is the result of compromise among several forces—school traditions, business demands, teachers' abilities, convictions of the head masters,

¹ The Vocational Education Survey of Minneapolis, 1916, contains an excellent statement of terms; see p. 600, etc. See also Bulletin, 1916, No. 21, Vocational Secondary Education.

etc. Commercial education under these conditions would be materially improved if the commercial course were frankly segregated, controlling all its own resources, both general and specific. To do this effectively there would need to be created a curriculum or department head, who, subject to the principal, should order and direct all the activities and policies of the commercial course.¹ Before such a plan is generally adopted there will need to be a decided change of conviction on the part of those who control present policies—principals, superintendents, and boards of education. In many instances increased expenses will be involved because the present easy exchange and overlapping of teachers and equipment will need curtailing. In the desire to obtain more effective results in specialized educational attainments other than commercial, a similar plan of organization seems inevitable. The tendency of aim of students, as well as the necessities of vocational education, are toward specific ends.

Changes of organization must be made if the schools are to recognize and effectively meet new conditions. It is entirely sound to hold that cosmopolitan high-schools may eventually consist of aggregations of sharply differentiated courses, after the analogy of the university composed of a number of distinct schools and faculties. Such an organization will be more economical, both in cost of buildings and in overhead and administrative charges, than are physically distinct schools, and the social and democratic advantages can be conserved in a large degree as well.

SPECIAL COMMERCIAL SCHOOLS.

Special commercial schools, known as high schools of commerce or commercial high schools, are increasing in number, though chiefly confined to the larger cities. The motives for their creation seem to be twofold: First, to provide additional high-school accommodations for a group of pupils known to be large; and second, to increase the effectiveness of commercial instruction through specialized endeavor. Special commercial high schools have been created in a much too ready-made fashion to have far outdistanced in effectiveness commercial courses in general high schools, and they differ not fundamentally from the commercial course which was the progenitor. Facts for this assertion are not wanting. The study of commercial education in New York in connection with the Hanus inquiry gave ample evidence of such a situation in that city. Various recent surveys of

¹ The commercial course should contain as many distinct commercial curricula as there are separate commercial vocations aimed at, e. g., office workers, stenographers, sales persons, secretaries. Commercial curricula should be separate for boys and girls. Bertha M. Stevens sets forth the reasons for this principle in the Cleveland Educational Survey, and the same contention was made in the New York School inquiry of 1912, section on commercial education.

other cities indicate that the situation in New York is typical. An examination of the courses of study issued by special commercial high schools shows that no other situation is claimed by these schools themselves. The courses of study for commercial curricula in general high schools and those for commercial high schools do not materially differ. As late as 1911 President Edmund J. James, of the University of Illinois, said:

We have as yet established no independent college of commerce in the United States upon an adequate foundation. We have not even established any institution which may be fairly called a commercial high school, that is a school with an adequate equipment, with a differentiated curriculum, and with an opportunity under favorable conditions to show what it can accomplish in an educational and technical way.

Unless it be assumed that the work done in the special high school is better, there is no reason to assume that the special school is making a greater contribution to commercial education than does the commercial course in the general high school. Practically the same regulations concerning the qualifications of teachers, size of classes, length of school day, diploma credits, and so on, are found in force for commercial courses and for commercial high schools. There are not found the differences that distinguish the character of the vocational industrial school from that of the manual training high school, namely, differences in physical equipment of school, differences in qualifications of teachers, product, length of school day, and the like.

The reason for this situation is due undoubtedly to the fact that there is no generally accepted body of principles for commercial education yet formulated. Industrial education possesses a distinct advantage in this regard. Practice, belief, and possibly the evidence in so far as it is available, lead educators to hold that commercial education is primarily general education, and so commercial education of varying types is administered in the spirit and with the methods of general education. There is evidence of a closer analogy between the methods of industrial education and that of commercial education in some of the newer postgraduate courses in commercial training. The Boston Clerical School, established in 1914, shows in method and spirit a distinct contrast from other undertakings in the way of commercial education. This school attempts no general training whatsoever. It is assumed that the applicant has secured, before entrance, the amount of general education which constitutes a satisfactory equipment for undertaking special work.¹ In this school the methods, practices, standards, qualifications of teachers, school terms, and similar details are those of vocational education, and are not those of general education. The success of the idea exemplified in this and similar schools shows the advantage of

¹ This school is a graduate school; it is described in the 1915 report of the Commissioner of Education.

attempting general and special education successively, instead of simultaneously. Were it possible to proceed upon the principle of successive steps when attempting vocational education, the gain would likely be recognized by all, but the exigencies of the preservation of majority opportunity are such that most secondary schools must be maintained with school programs which offer general and special subjects simultaneously. The postponement of the time when the child may elect special subjects has seemed to limit the opportunities for those who must leave school early, and none may deny that this is a fair assumption. The simultaneous plan is a rough compromise which seems to meet varying conditions with greatest facility. Conservation of opportunity for the child, and efficiency of achievement, involve a conflict of method apparently, but as yet there has been developed on an extensive scale no better machinery than the simultaneous plan for meeting the twofold aim. The simultaneous plan immediately precipitates the question of values, such as the amount and relation of general subjects for cultural values, and the proportion and quantity of special subjects for specific values. The present resultants, as seen in typical commercial courses or in commercial high schools, described above, are easily understandable in the light of school traditions, social convictions, and, indeed, in some degree, perhaps, in the essential evidence.

REFORMS.

While the defenses are strong for present practices, it may readily be admitted that radical improvements are to be anticipated. Let us consider seriatim with respect to the threefold character of commercial courses some of the improvements that may be expected in each group. The general or nonvocational subjects are practically the same for commercial pupils as for others. The question naturally arises whether or not improvement may be expected in this group. Those who deny that radical changes should be attempted here make a fairly good case, though it is by no means conclusive. Business is a profession rather than a trade. The business man deals with people more than with material. The same kind of general education that is suitable for the future lawyer or doctor is that which is needed for the business man.¹ Should the procedure of successive steps be followed in commercial education, there could be but little dispute about the propriety of the character and content of general subjects as a suitable foundation for future specialized training. Again, it is generally held by many educators that life appreciations, race inheritances, citizenship, culture, or what terms you will, are best

¹ Minneapolis Survey on Vocational Education, p. 604, "The best preparation for this vocation (office work) is, therefore, general education, plus intensive training, plus advanced extension courses taken in connection with actual employment."

attained by means of the systematic pursuit of those subjects constituting the nonvocational part of our special curriculums. Denial of this position involves one in the intricacies of the commonly accepted educational philosophy, a bootless task. Certain it is that no alternative formulation of principles or of subjects is sufficiently clear to-day to warrant a sudden or a radical change. Before leaving the old landmarks it will be necessary to perceive more clearly what more promising lands lie ahead. General or nonvocational subjects are being taught more vitally. There is, likewise, a better selection of material. The high-school pupil, whatever his objective, will find available a more interesting, more valuable, more intelligible offering of nonvocational subjects than was the case a decade ago.

The evident reform to-day lies not so much in the selection of the material offered for the nonvocational part of commercial education as in the methods used in teaching. The general subjects should not be taught purely on the basis of deferred values, like college preparatory work. These subjects should not be taught chiefly for abstract appreciation values; but, instead, ability to respond, to appropriate, and to associate should be constantly sought. The value of the career motive can be made to operate even in general disassociated subjects. It is necessary, consequently, to segregate commercial pupils into distinct divisions (in general high schools) for purposes of nonvocational instruction. There is need for teachers who can appreciate the interests of commercial pupils, who know much of the environment for which the pupil is destined, and who sympathize with the aspirations and outlook of the pupil. Some of the best commercial schools are making progress in these matters, but the tendency is not uniform, for the established traditions of the general schools from which our teachers for special schools are drawn are too strong to be easily broken.

RELATED SUBJECTS.

The body of related technical subjects for commercial education is made up of such subjects as business correspondence, commercial geography, commercial law, economics, business organization. These subjects constitute, as it were, the general theory underlying commercial practice. No such controversy regarding fundamental character of purpose is found here as is true with respect to the non-vocational group of subjects. There are discernible two wings of practice with regard to related technical subjects, namely, one wing made up of those teachers who emphasize theoretical aspects of these subjects, and the other wing of those teachers who emphasize application phases. No particular counsel need be given regarding this situation, for the tendency is strong toward the second practice. Commercial geography is becoming less descriptive and locative, and

more concrete and applicable. The pretentious name, commercial law, is being abandoned, and this subject is described as the elements of commercial law, or "commercial practice in relation to legal procedure." Selections from economics are becoming more suitable for high-school pupils, with the consequent abandonment of the speculative phases of the subject common in college courses. New and better textbooks and illustrative material are facilitating the work of the teacher in improving the character of related technical instruction.

The strongest element of the commercial courses is the vocational group of subjects. Criticism here arises over the failure to recognize additional functions of business, such as store service and salesmanship and the failure to differentiate our training to keep pace with the rapid subdivision of work in business, involving usually the operation of various kinds of office machinery. The historic commercial vocational subjects of our high schools have been stenography, typewriting, bookkeeping. Modern business needs workers with familiarity in these arts, but it needs in greater proportion workers trained in merchandising, salesmanship, and advertising. Business itself has but recently required preliminary skill in these kinds of service. The schools heretofore have trained the clerical workers, but business itself has trained or developed within its own organization the workers who render service other than clerical. Analysis of proportions of workers in standard business organizations show about 15 per cent of the force is clerical, and about 35 per cent, often considerably more, is in the service section (selling, merchandise). Commercial subjects have not been suited for the training of workers for the major functions of business, but have, on the contrary, given preparation for those specialized duties of business which are too technical to be picked up in a haphazard fashion on the job. Analysis of typical business organizations shows that the majority of workers have pursued no commercial course in school.¹

More and more functions of business other than clerical are becoming too technical to be picked up effectively by the experience process, or perhaps it is truer to assume that the standard of service in business houses is rising. Again, the effect of the growing attention to efficiency and competitive influences as well unite to raise to higher planes functions once considered unskilled, or at least unimprovable by the processes of formal training.

VOCATIONAL WORK.

The vocational work of commercial courses needs a number of changes and expansions. The sexes should be separated, and courses,

¹ Report of the Rochester Chamber of Commerce of Commercial Education, 1916.

different for boys and girls, provided. Commercial courses at present are planned primarily for girls, with the consequence that boys are not so successful in them and are not represented numerically in proper proportion. The present clerical courses should make provision for the specialized demands of office procedure. Additional equipment, differing in character from that at present furnished, should be provided schools in sufficient quantity to offer our pupils opportunity to secure typical and standard experience. Our present provision (if there be one) is on a manual-training basis; needed equipment should be similar to that of the productive plant. Commercial education has too long been considered a cheap method of routing boys and girls through a high-school course. For larger values we must make larger investments. After all, the idea is not low cost of instruction, but effectiveness of result.

It may be assumed that the amount and variety of specialized machinery recommended are beyond the resources of smaller communities, and that consequently only larger communities may be expected to heed the counsel here offered. It must be remembered that the standards of efficiency are the same for the small high school as for the large, and that small communities are as ambitious for the success of their boys and girls as are large communities. Small communities compete in the matter of furnishing effective general and college preparatory education, and justice to the commercial pupil may well compel a larger outlay for commercial courses, if proper standards are to be maintained. When it is apparent that the smaller community can not find the resources for proper commercial equipment there should be no pretense about the situation. The commercial course should attempt that portion of effective commercial preparation which the resources of the school permit, and further steps in commercial training should be relegated to more competent and favored institutions. The pupil should be advised exactly as to additional procedure necessary to secure complete training. In some communities it will be far better for the high school to cooperate with the private business college than to attempt an impossible competition. The community should either furnish the funds for competition with other educational agencies or else abandon the pretense; the good of the child should not be sacrificed for the sake of scholastic conceit.

It has been suggested that the adoption of the cooperative or part-time plan might avoid large outlay for specialized commercial machinery. Let it not be forgotten in this connection that a great deal of commercial preparation is undertaken in smaller communities when local business houses furnish no opportunities for competent, part-time plans. The student in such communities looks forward

usually to commercial employment in some large city too remote for availability for part-time practice. Again, the adoption of part-time practices will need a great deal of expansion before it is practicable even for high-school pupils in the communities where big business houses are located. For 50 years office workers have been trained preliminary to entrance into business. Private business schools furnish a generous supply of workers with sufficient skill to begin productive work, so that the employer feels no inherent necessity of sharing the burden of training. The part-time suggestion is theoretically and pedagogically correct, but it lacks availability as an immediate means of avoiding the necessity of maintaining the all-school plan with better and larger equipment as well as with better standards of achievement. Our present provisions for commercial education must be maintained under improved conditions, while the part-time plan is encouraged and expanded. We are in no position at present to burn our bridges.

SALESMANSHIP COURSES.

The incorporation of salesmanship into high-school commercial courses, a current phenomenon, is well under way and expanding rapidly. The impetus for this enterprise is coming largely from business. The National Retail Dry Goods Association has secured Mrs. Lucinda W. Prince, director of the school of salesmanship connected with the Women's Educational and Industrial Union of Boston, also with Simmons College, to acquaint interested communities with the possibilities and advantages of the plan. The list of cities adopting a practical program for teaching salesmanship is already large. Among them are the following: Boston, Springfield, Chicago, Minneapolis, Toledo, Cleveland, Cincinnati, and San Francisco. The valuable features of this plan involve, first, the securing of teachers technically and practically trained, the adoption of a part-time method of training pupils, and the active cooperation of business houses in the operation of courses. It will be interesting to note the influence which the part-time method adopted by salesmanship will have upon older commercial subjects. In teaching clerical arts the schools have proceeded quite commonly upon the theory that effective practice work should be furnished within the school. Part-time office work may naturally be expected to receive encouragement if the methods adopted for salesmanship prove superior. It is generally accepted by teachers of salesmanship that no method other than the cooperative, or part-time, can be successful, because the difficulties of providing actual conditions of work in the school for sales people are well-nigh impossible. Approximations

of similarity between real office plants and school imitations have been sufficiently close to render defensible achievements in the way of training clerical workers wholly within the school. The hope of getting better results promises to lie in the extension of part-time methods to all kinds of commercial training.

INVESTIGATIONS, EXPERIMENTS, AND TENDENCIES.

Investigations regarding the character, worth, and need of commercial education are coming from school surveys, surveys of the National Society for the Promotion of Industrial Education, from chambers of commerce, and in rare instances from committees of commercial teachers.¹ Nearly all studies deal with the objective side of commercial education, namely, business needs and values. Little analysis has been made of the methods used in schools. Recommendations contained in these surveys deal chiefly with needed expansions, such as the inclusion of salesmanship and with the lack of accomplishment in the three R's, such as spelling, arithmetic, penmanship; also the inculcation of general virtues, such as loyalty, neatness, accuracy, responsibility, good manners. Very little adverse comment is made upon the effectiveness of subjects pursued in the schools, unless the failure to achieve better results in elementary subjects be a high-school as well as an elementary-school responsibility. The high schools are criticized in these investigations not so much for what they are doing as for what they do not do. The emphasis which business puts upon personal qualifications as a business asset is impressive. Business men seem to assume that general moral and personal qualities should be developed in pupils by means of particular, specific courses. Modern pedagogy has hoped to secure these undoubted advantages indirectly by associations, by inspirations from literature, and by social contacts. The schools need to devote renewed energy to the securing by some method of better standards of the moral and personal qualities demanded in business. The common impression that high schools teach subjects and not pupils is encouraged by the kind of criticism made upon the high-school product. Undoubtedly the commercial teacher can use to advantage with commercial pupils the criticism of business men anent moral and personal qualities. The pupil may more readily apprehend the specific necessity of such virtues when associated with conditions of success in business. Here, again, the career motive

¹ Examples of surveys and investigations: Chambers of commerce—Boston, Cleveland, Chicago, Rochester. National Society for the Promotion of Industrial Education: Richmond, Minneapolis Survey, Women's Educational and Industrial Union, "Women in Office Service." Massachusetts State Board of Education—Report of State Committee of Commercial Teachers.

may be used as an incentive. It is quite likely that commercial teachers have seen more clearly the importance of technique as an achievement than the importance of attitude on the part of the pupil. The great advantage of the part-time method is that defects on the part of the pupil, personal and moral as well as technical, will be rendered more evident under real practice conditions, and can be corrected in the training period while in school. It is very doubtful whether the all-school method can furnish situations sufficiently real to bring out the exercise of needed moral and personal qualities. Even if the school should be able to present the occasions calling for the exercise of such qualities, it is doubtful whether the pupil can be as much impressed by the precept and counsel of the school as he will be by contact with the rigorous and uncompromising standards of actual business.

STANDARDS OF ACHIEVEMENT.

Commercial educators are showing considerable interest in the question of standards for achievements in commercial education. Contrary to the assumption of many, the formulation of standards for educational achievements of any nature is a means of relief rather than an added burden. The old adage that worry, not work, kills men is particularly true of the teaching profession. The assurance that a teacher feels when his objective is clearly discernible is an incentive which furnishes a recompense for the additional effort involved. It is the uncertainty of what should be attained that takes the joy out of achievement. No clear formulation of standards can be hoped for in commercial education until considerably more is known about business needs, and until the practices of commercial education approach a more common basis. Standard results in stenography and typewriting are roughly definable, principally through the efforts of typewriter placement agencies, where tests and ratings are maintained on a uniform basis. Standards in penmanship are likewise coming into acceptance, through the issuance of measurement scales by educational experts and by the devices adopted by systems of penmanship, illustrated by the Palmer and Zaner methods. Competent standards for results in bookkeeping, office practice, and salesmanship are not yet available. A description of attempts toward formulation of standards in these subjects is contained in the chapter corresponding to this in the Report of the Commissioner of Education for 1915, and nothing additional to this account can be described at the present time.

MISCELLANEOUS SUGGESTIONS AND COMMENTS.

Various surveys and investigations mention the need of vocational guidance in commercial courses.¹ The pupils looking forward to commercial occupations should be better informed concerning the conditions, the demands, the difficulties, and the opportunities of business. Present teaching of commercial subjects does not bring sufficient attention to these matters. It emphasizes technique and theory, but does not effect a keen realization in the pupil of actual conditions of employment. Placement of commercial pupils by the schools is growing in effectiveness, but analysis of causes of placement shows that extraneous and fortuitous agencies are still more potent in the placement of pupils than are the organized efforts of the schools. The largest number of pupils are placed through the efforts of friends; in descending importance pupils secure positions through answering newspaper advertisements, through typewriting agencies, and only lastly through the school, which ought by reason of acquaintance with the capacities and aptitudes of the pupils to figure as the primary source of placement. It is known that a large proportion of commercial graduates now secure positions to which their training has not been directed and for which their capacities are not suitable. The importance of follow-up work of commercial graduates is being recognized and attempted, in so far as the meager resources available for the schools will permit. Follow-up work of graduates can be made of the highest value to commercial education in two ways: First, for the pupils, in securing convincing evidence about business needs and opportunities; second, for commercial teachers in obtaining accurate and definite information about the worth of commercial subjects. Commercial education has been obliged to estimate its values from the theoretical standpoint of the school, and not from the practical judgment of business. No time should be lost in furnishing our commercial schools with the resources necessary for the proper guidance, placement, and follow-up work of pupils. The plan will involve the increasing of present corps of instructors to the extent of adding placement secretaries; or better still, a kind of teacher known as the vocational assistant should be secured, who is familiar with business conditions as well as with school environment, one who has the training and capacity to organize and conduct effectively the varied activities constituting the service comprised in the term vocational guidance. Commercial education can never in any sense be made vocational until this function is added. It is useless to state that present teachers should perform this service, for they do not possess the

¹ "Women in Office Service," Women's Educational and Industrial Union.

time, the opportunity, or the knowledge of the problem to achieve effective results.

Commercial education to-day needs the kind of national leadership that characterizes other educational effort, such as is found in industrial educational, manual arts education, college preparatory education. Commercial education to-day lacks any acknowledged leadership; nor does it possess any recognized philosophy or body of principles. No agreement of a national character has yet appeared. In 1913 a committee on business education was appointed by the National Education Association. No report was ever issued by the committee. In 1916 a new committee was appointed by the National Education Association, with Dr. Cheesman A. Herrick, president of Girard College, chairman. Administrators of commercial courses will look forward with considerable interest to the report of this committee, for the time has apparently arrived in commercial education when leadership will have influence and when principles will receive consideration. It is hardly necessary to state that at present there is no national association studying principles affecting commercial education and that there is little constructive literature on the subject. This situation is not anomalous when it is remembered that commercial education is conceived primarily as general education, and that consequently directors of commercial education are concerned with the principles, the literature, and the agreements of general education. There are various flourishing associations of teachers of special commercial subjects, such as stenography and bookkeeping, and there are numerous periodicals dealing with the teaching of these subjects. There is much discussion among teachers of commercial subjects about systems of stenography, textbooks in bookkeeping, methods in typewriting. Commercial education to-day is a loose confederacy of school subjects, general and special, in a high-school curriculum. After the metaphor describing the political condition of this country before the formation of the Union, these "stout staves" need binding irons to make a vessel which shall take shape, hold together, and constitute a more useful educational instrument.

It is unfortunate that the service of State and National educational commissions is as yet unavailable for commercial education. The report of the National Commission on Vocational Education did not recommend commercial education for national subsidy, on the theory that communities were already vigorously committed to the support of this kind of endeavor. Commercial education, while not in need of the stimulation of financial support, does need extraneous directive influences, such as National and State commissions could furnish. Left wholly to community control, these promise to continue unduly

the variety of practice and the inadequacy of conception which have characterized commercial education in the past. Recent influences have brought into prominence two dominant and somewhat conflicting educational forces, one of which may be termed general education and the other industrial education. Vacillating between these two poles, commercial education promises to go first in one direction and then in the other. Commercial education, however, should blindly imitate neither, but from its nature and function should become a distinct entity, with its own body of principles, philosophy, practice, and leadership.

CHAPTER XIV.

AGRICULTURAL EDUCATION.

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AGRICULTURE IN SECONDARY SCHOOLS.

The Bureau of Education attempted during the spring of 1916 to collect definite and complete information concerning the teaching of agriculture in public high schools and in special agricultural schools of secondary grade. A tabulation has been made of all schools reporting and will be published later as a bulletin. The following is a brief summary:

Number of public high schools reporting teaching agriculture.....	2, 175
Established before 1901.....	19
Established from 1901 to 1905.....	33
Established from 1906 to 1910.....	413
Established since 1910.....	1, 710
Reporting teaching agriculture primarily—	
As informational subject.....	1, 521
As vocational subject	566
Number of persons teaching agriculture:	
Male.....	2, 007
Female	247
Number of these with any special training in agriculture, including those with full four-year agricultural college courses, short-term courses, normal school agricultural courses, summer courses, etc	¹ 1, 021
Number of students of secondary grade studying agriculture:	
Boys.....	24, 743
Girls.....	16, 312
Number of schools using school land for instructional purposes.....	392
Number teaching through home-project method.....	337
Number in which instruction consists wholly of classroom work.....	416
Number in which instruction consists of classroom work, with laboratory exercises and observation on neighboring farms.....	1, 064

¹ Or 45 per cent.

Number of special secondary agricultural schools supported in whole or in part by the States.....	68
Total cost of maintenance.....	\$766, 000
Total number of teachers:	
Male.....	276
Female	140
Total number of pupils:	
Elementary—	
Male.....	615
Female	464
Secondary—	
Male.....	3, 893
Female	2, 408

This summary does not include special schools of agriculture maintained by the State colleges of agriculture on the college campus. Schools of this type are maintained by the State agricultural colleges of California, Colorado, Idaho, Kansas, Mississippi, Nebraska, Montana, North Carolina, North Dakota, and Washington (school of science). Agricultural courses of secondary grade are given to special students in 20 other State colleges of agriculture.

The school instruction in elementary agriculture in all parts of the United States is becoming more and more closely correlated each year with boys' and girls' agricultural club work. While it is true that most of the club work in the United States is under the cooperative direction of the United States Department of Agriculture and the State colleges of agriculture, there is much done by education authorities independently and also by education authorities in cooperation with the agricultural colleges. A report on the work of the Department of Agriculture is given later in this chapter. The work in Cook County, Ill., may be cited as an instance of effective teaching of agriculture through methods similar to those employed in the club work, but independent of the Department of Agriculture or the State college of agriculture.

In the Cook County plan all pupils 10 years of age and over in the schools under the supervision of the county superintendent are required to take a course in school-home projects as a part of their regular school work. The projects are not all agricultural; in addition to the field-and-garden project, the poultry project, and the cow-testing project there are sewing and cooking projects, a business project, and a music project. All projects are under the supervision of the county superintendent, his five field assistants, known as "country-life directors," and the regular teachers, a number of whom are retained during the summer, giving their entire time to visiting the homes and supervising the projects. The five country-life directors spend part of their time during the year and all of their time during the summer visiting the homes to inspect the home projects.

A majority of the pupils, both boys and girls, are in the field and garden club project. The general plan is as follows: A plat is selected by each pupil, in consultation with his parents, as near the house as possible, varying in size from one-tenth to 1 acre, according to the child and the crop to be raised. The amount of rent to be paid is fixed, the pupil being required to pay rent whether the crop is on land owned by the parent or not. The child then must stake out and measure and draw a diagram of the plat. This is verified by the country-life director on his first visit. The child and the father decide what to plant. The cultivation is done by the child, under the joint direction of the parent and the country-life director. The crops raised are usually marketed by the fathers with their own garden truck, although in several instances boys market their own produce. An itemized account of all receipts and expenditures must be kept by the child as directed by the county director. Notebooks are furnished by the county superintendent; each pupil includes in his book a diagram of his plat, an expense account showing all receipts and expenditures, and a chronological record of the work of cultivation, including the time spent in labor. When the crop has been disposed of, the accounts are balanced and the net profit or loss computed. The net profits belong to the pupil and must be accounted for in the notebook. They are to be banked, loaned, or wisely expended, as determined by the parents. Each pupil is required then to write an account or story on his school-home project. The notebook, essay records, and reports are all taken into account in determining the pupil's standing.

School achievement credits are granted on recommendation of the country-life directors to pupils who complete their project, earn the minimum net profit fixed by the county superintendent, and do their work in a satisfactory way.

In the poultry project each child must have a minimum of six fowls kept separate from his parents' poultry. Records are kept in a notebook furnished by the county superintendent; there must be an exact record of the egg production by the fowls. When a fowl is killed for eating purposes, the member credits himself with the market value of the fowl. The project runs for a full year.

The cow-testing project is open only to boys 12 years of age and over. Each member must select two of his father's cows for testing; the tests run for a period of four months. Samples of milk from each cow are brought to school on the same day of each week for testing; the Babcock method is used. Members must ascertain, by weighing, the amount of milk produced by the cows under test on the day samples are tested. Pupils must ascertain the weight of the different foods consumed by the cow under test on the day samples are tested. The records kept in the notebook furnished for this pur-

pose show the date of each test, the weight of milk, per cent of butter fat, price of butter, value of butter, pounds of different feed consumed, market price of different feeds consumed, value of feed consumed, net profit or loss.

At the close of each school year an annual meeting is held of the pupils who have completed satisfactorily their project work. It is called "Achievement Day," and during the public exercises achievement credits are awarded to all pupils recommended by the county-life directors. Definite credits are given according to fixed points. When 10 credits have been earned, the achievement emblem is awarded; this is a four-pointed gold star encompassed by a circle with the letters "S. A. C." (School Achievement Credits) on the emblem.

The work in Cook County has been in operation for five years. It was inaugurated to vitalize the work of the rural schools by putting into practical application the principle "Study what you have need of, or soon will need, and learn by doing." It has been successful from every standpoint.

As an example of club work done in cooperation by education authorities and the State agricultural college, the work in Oregon may be cited. The State law requires the work to be done under the direction of the State superintendent of public instruction, who employs two fieldworkers to devote their time to the organization and instruction of industrial clubs, assisting in organizing, holding, and judging local and county school fairs, and any and all other work in connection with industrial education. In all of this the field workers cooperate with the agricultural college. All enrollments of club members are filed with the college, and bulletins of instruction are printed by the different departments and sent out to the club members or to the county school boards and teachers, who distribute them to the club members. The plan seems to be satisfactory. It secures the cooperation of the school authorities and teachers, and correlates the work very closely with the other work of the public school. In Washington State a somewhat similar plan is followed. A State leader is employed under the director of extension of the State agricultural college. By agreement with the State department of education the college directs the club organization and instruction, and the State department has charge of the fairs. Direct connection with the school is secured through county superintendents, as well as through the State department. Agriculture is a required subject in the public schools. Each eighth-grade pupil must take either agriculture, domestic science, or manual training before receiving a diploma admitting him to high school. The State department of education allows credit to boys and girls who have completed satisfactorily agricultural club work under the direction

of the college, the amount of credit being one-half of the total requirement in agriculture.

The question of the administration of the agricultural club work in the various States is receiving more and more attention. There is marked difference in opinion as to whether the administration in each State should be a function of the State department of education or of the State agricultural college, and if in the college, whether in the department of agricultural extension teaching or in the department of agricultural education. The present movement for agricultural clubs started in the agricultural extension teaching movement purely as a means of extension teaching to improve agricultural production and the expense of maintaining the work has been borne very largely by the colleges from funds received from the Federal Government for extension teaching purposes. For boys not in school it will remain undoubtedly an extension teaching movement; for those in school, however, it is fast growing away from an extension teaching movement and becoming an important factor in their general education. There seems to be a rapidly growing opinion that for pupils attending school the club work, when undertaken, should be a definite part of the regular school work, and that it should be under the administration of the educational authorities, with the cooperation of the agricultural colleges. The colleges should furnish the technical agricultural information necessary for conducting the work. The club work would then become the practicum for the school instruction in agriculture. If agriculture is to be taught in elementary schools, some kind of practice work is necessary, and the club work or some other form of home-project work seems to be the best kind. Incidentally, it would still have value as extension teaching, as does the home-project agriculture in vocational agricultural schools.

The Bureau of Education attempted recently to collect opinions from persons interested directly in the club movement and in the public schools relative to this question. A majority of the men employed by the agricultural colleges favor the retention of the club work as extension teaching in the college; there is strong opinion to the contrary, however.

Dr. L. H. Bailey, formerly dean of the New York State College of Agriculture, in a chapter on "Boys' and girls' contest clubs" in a recent book,¹ declares:

The fundamental consideration is that all this kind of work is educational. It is not primarily agricultural work, not undertaken directly to improve the farming of a region. The primary consideration is its effect on the child. If we can not accept these propositions then I should be in favor of giving up the boys' and girls' contests.

¹ York State Rural Problems.

It is legitimate to use domestic animals and crops for the primary purpose of improving and advertising the agriculture of a region, but we must not use children this way. Animals and crops are agricultural products; children are not agricultural products.

If these positions are granted we shall agree that this contest work between children must be put more and more into the hands of those who are trained in education and who carry the responsibility before the public for educational effort. I think that this kind of work should be a part of the public-school system. On their own account schools must take up this and similar work if they are to secure the best results for themselves and to cover their own fields. The organizing of laboratory work at home under the direction of the teacher is one of the most important means of tying the schools and the homes together and making the school a real part and parcel of the community.

When this time shall come the work with crops and domestic animals and home practices will be a regular part of the school day, incorporated inseparably with the program of education. We must hope for the time when there shall be no necessity for the separate organization of such clubs, the school having reached and stimulated the situation on every farm and in every home. It is sometimes said that the agricultural agents organize the contest work better than the teachers. Perhaps; but the work is essentially school work, nevertheless, and we should now be looking for results in the long future.

This question is but a part of the general question of what should constitute a State system of agricultural education and how it should be administered. President K. L. Butterfield, of the Massachusetts Agricultural College, in his annual report for 1916, expresses what seems to be an agreement with the most progressive thought on this question when he says that the agricultural college should be an organic part of the State system of agricultural education, that it can not and should not try to administer the system, but that it should be in very intimate association with the controlling factors; that the college should have definite responsibilities in the organization of the materials and in the formulation of the methods used in all grades of agricultural instruction, in the preparation of teachers, and in assisting to correlate the parts of the system. Every State college of agriculture is, of course, interested in the problem. Each should have a part in the plan and ought to make some real contribution to it and to its continuing success. The following is abstracted from President Butterfield's report:

SOME CHARACTERISTICS OF A STATE SYSTEM OF AGRICULTURAL EDUCATION.

1. *It should have definiteness of aim.*—Fundamentally, it is the province of agricultural education to help solve the rural problem. The rural problem is partly a question of securing better farm practice; partly a question of organizing better farm business; partly a question of developing a better farm life. In a word, the rural problem consists in the improvement or progress of the rural people. Many forces may be invoked for this improvement, such as education, socialization, organization, even religion; but the problems are solved by men and women. Hence, the training of rural problem solvers is the main purpose of agricultural education.

2. *It should be inclusive in its human reach.*—It will reach all ages, from the youngster in the grades to the graduate student in the college. It will provide instruction for those out of school, both young and old. With respect to emphasis, it will serve chiefly the people who must make a living by farming, but it must also train specialists or professional experts. Nor will it neglect people of the city; many of them as well as the country folk need agriculture.

3. *It should be broad in its vocational scope.*—It will deal at the bottom with the technical or productive process, but it will also concern itself with the management of the farm; lay large stress upon such economic questions as access to the land, credit, cooperation; and it will emphasize a fuller community life, through the home, health, recreation, beauty, morals.

4. *It should be comprehensive in its activities.*—Teaching is the backbone of any system of education, but research and experimentation are vital to good teaching, particularly in such subjects as agriculture. And then it will extend itself not only to the pupils in the schools, but to every person on the land.

5. *It should be liberal in its spirit.*—It will emphasize the dignity of vocation. Vocation is a means of social service as well as an opportunity to make a living. It will impress upon the student mind the idea that vocation is also both a means of intellectual development and a great factor in the building of individual character. Vocational education will recognize that the public schools must assist in fitting boys and girls for citizenship in the largest sense, as well as in giving them capacity to meet the problems of their personal life.

6. *It should be complete in its correlation of parts.*—This is to some degree a question of the division of labor between institutions. It is also a question of administrative responsibility clearly defined. It means cooperative planning among all the different institutions.

7. *It should be an organic part of the State educational system.*

THE GROUPS OF PERSONS TO BE REACHED IN A STATE SYSTEM OF EDUCATION.

1. *Pupils in the "grades" of the public schools.*—The material which enters into agriculture in its simpler forms is capital material for general educational use among pupils ranging in age from 8 to 14. They may profit thereby not because they wish to become farmers, but because they may gain a part of their education by means of agricultural school gardens, home gardens, nature study, poultry clubs, and corn clubs; those various types of work with plants and animals that are the beginning of agriculture should become an organic part of our school system, and available to all pupils under 14 years of age.

2. *High-school pupils desiring general agriculture.*—The opportunity for education by means of agriculture should be carried through the high school, with elective courses, finding a place alongside the other subjects in the course. The teaching should be very concrete and practical and should bring the pupils into working touch not alone with these processes by which plants and animals and all nature's forces are subordinated to human uses but with the processes by which the business and life of rural people are related to the business and life of the nation as a whole.

3. *"Boy farmers."*—We come now to those classes of pupils who are to be offered agricultural study rather definitely for the purpose of future vocational activities. The first group may theoretically comprise boys and girls under 14 years of age. Personally I question whether "vocational" agriculture should begin before 14. I have been impressed by the fact that Germany, as well as the other European countries which have patterned their educational systems after Germany, has declined to permit the serious study of vocational agriculture by boys and girls under 14 years old.

4. *The young agriculturists.*—Numerically speaking, the most important group of pupils who should be provided with facilities for definite training in agriculture for vocational purposes are those between 14 and 17 or 18 years of age. The facilities for this group will be twofold, first, agricultural departments of public high schools more or less highly differentiated, and second, a system of county, district, or special schools. The "junior extension service" of the agricultural college, which, if fully developed, will be an expansion of the present successful system of our boys' and girls' agricultural clubs, promises to be of great value also. Moreover, it has been proved that a course in agriculture or home economics given one hour a day for four years, in connection with other high-school subjects, can be made to yield remarkably successful training for boys and girls preparing for agricultural practice and rural home life. But I predict that the Massachusetts plan of agricultural departments, in which the pupil gives about half his time to agriculture, will become a very important and vital part of our State system of agricultural education—perhaps in some respects its characteristic feature—so far as pupils of high-school age are concerned.

5. *Candidates for county agricultural schools.*—I believe in the county or district agricultural school, and that a complete system of agricultural education in any State must provide for a number of these schools. There are objections to them. They are rather expensive. If great care is not taken they may encroach upon the work of the agricultural college. Their final place in the system of agricultural education is likely to be in advanced and specialized work for pupils of high-school age who have had perhaps two years in the agricultural department of the high schools, or for those who have finished the work of such a department, but are not prepared for college.

6. *The college student of agriculture.*—There is next that group of pupils from 18 years upward who will attend the agricultural college. Many of these will go back to farming; others will go into expert service in connection with agriculture. Probably there will always be a number of students graduating from an agricultural college who will never be directly connected with agriculture, for this is precisely what occurs in nearly all professional schools, including law and even medicine. But in the main the agricultural college is to be considered a professional school, or at least a semiprofessional school, and it is here that there is an opportunity for the training for leadership in solving the larger problems of agriculture and country life.

7. *The graduate student.*—In connection with the agricultural college there is room for the development of a graduate school of agriculture. Not only room, but great need, for neither research nor teaching can be vitalized or pushed to its full measure of development unless constantly reinforced by men of the highest training.

8. *The demand for short courses.*—I am convinced that the time has arrived when these short courses must be developed more fully and fitted more completely into the State system of agricultural education. The men at the head of the agricultural departments of our public schools, and especially those who are connected with the county agricultural schools, are thoroughly convinced that many of the pupils of these schools wish to attend an agricultural college for a period of from three months to an entire year, for the purpose of coming into contact with the recognized authorities in the various agricultural specialties that are emphasized in a well-regulated agricultural college. To such pupils this work would be a sort of graduate course. It would bring them into contact with the wider reaches of the subject, with the best prepared teachers, with the largest equipment, and with the most complete resources for agricultural investigation and instruction. There are, moreover, a great many

adults who would like special work in summer or winter who can not take our regular courses.

9. *The city man and the soil.*—In a State like Massachusetts, where the urban population constitutes nine-tenths of the people, there is rapidly coming on a demand for agricultural instruction to persons who are not immediately connected with agriculture, and perhaps who do not intend ever to be connected with agriculture as an industrial pursuit. The homestead commission has aroused interest in the problems of teaching agriculture to families, in the development of garden cities and in vacant-lot cultivation in the cities. There is also an increasing number of men and women, both among the wage earners and among the salaried men in the cities, who wish to become farmers, but who cannot take advantage of present institutions for agricultural education.

10. *A schooling for the youth at work on the farm.*—In spite of all we can do through institutions, through formal schooling, there will always be a very large proportion of youths out of school who still need, and will take advantage of, some plan for continuing their agricultural education beyond school days. We need, then, extension schools in connection with our public school system, chiefly, perhaps, in connection with agricultural departments of public high schools and with the county agricultural schools, which shall during the evenings of the long winter give very definite instruction in agriculture, home economics, and country life to the boys and girls who cannot attend the regular day school.

11. *The man in the furrow.*—What has been said with reference to youths is even more true of adults. The extension service of the agricultural college has demonstrated the hunger for information that exists among the great masses of the people, and this work must be kept up, organized, systematized, and better related to the other agencies. These adults will also be reached more or less by the administrative boards already referred to.

A SUGGESTION CONCERNING THE NECESSARY MACHINERY FOR AGRICULTURAL EDUCATION.

I. *The Public Schools.*

Presenting agricultural material as one means of education, through—

1. Boys' and girls' agricultural clubs: Supervision by farm bureaus and the college.
2. School subjects: Nature study; elementary agriculture (?).
3. Courses in agriculture in the high school: Three to five hours per week for one to four years.

II. *The Public School.*

Teaching agriculture for vocational ends, through—

1. Agricultural departments of the high school: To reach pupils 14 to 16 years of age and 16 to 18.
2. Continuation and extension schools: In connection with public high schools, to reach pupils no longer enrolled in the public schools, ages 14 to 18.
3. Agricultural education for families, as proposed by the homestead commission.
4. The public schools as centers for extension work in agriculture and country life, carried on by the farm bureaus and the college.

III. *County or District Agricultural Schools.*

1. General and specialized agriculture: Temporarily for boys 14 to 18.
2. Specialized courses in agriculture, such as poultry husbandry, dairy husbandry, pomology, etc., as the eventual purpose for boys 16 to 18; these courses correlate with the work of the agricultural departments of the high schools.
3. Extension work, in cooperation with the county farm bureaus and improvement leagues; this should be coordinated closely with the work of the county schools on the one hand, and with the agricultural college on the other.

IV. *The Agricultural College.*

1. Investigation.
 - (a) Research.
 - (b) Experimentation and testing.
 - (c) Cooperative studies in agricultural resources.
2. Teaching.
 - (a) The four-year course for a degree.
 - (b) Graduate work.
 - (c) Short courses for pupils of 18 years and upward.
 - A. Short courses of college grade, one to two years.
 - (1) For graduates of county agricultural schools.
 - (2) For graduates of agricultural departments of high schools.
 - (3) For graduates of high schools who have not had agriculture and are not eligible to the four-year course.
 - (4) For graduates of liberal arts colleges.
 - (5) For adults 21 years and over not eligible to four-year course.
 - B. Short courses giving elementary and specialized work, if the demand requires, for those 18 years of age and upward.
 - (1) Winter course of 12 weeks for highly specialized work, such as butter making, etc.
 - (2) Winter course of 20 weeks for students desiring more general work.
 - (3) Summer course of 6 weeks, primarily for teachers of nonvocational agriculture.
3. Extension service.
 - (a) General extension work for adults.
 - (1) Lectures and study clubs.
 - (2) Extension schools.
 - (3) Correspondence courses.
 - (4) Demonstrations.
 - (b) Junior-extension work.
 - (c) Extension work for urban and suburban residents.

NOTE.—It is understood that so far as possible work in rural home making will parallel agricultural work throughout the whole system.

AGRICULTURAL EDUCATION AT MEETINGS OF THE YEAR.

Association of American Agricultural Colleges and Experiment Stations.—The twenty-ninth annual convention of the Association of American Agricultural Colleges and Experiment Stations was held at Berkeley, Cal., August 11 to 13, 1915. While the convention took no action of outstanding importance, there were fully the usual num-

ber of matters of special interest to the land-grant colleges and the various departments of their work.

The solidarity of the land-grant colleges was emphasized in the presidential address of President E. A. Bryan, who pointed out the national character of these colleges, their common interests and purpose, and the place they have occupied in education. Because together they constitute a national system of education he urged a closer relation of the national Bureau of Education to them in helping them to work out their mission; and he advocated a national Department of Education, presided over by a secretary.

The correlation of the college of agriculture of Ohio State University with other institutions in the State was described by Dean Alfred Vivian. The plan has now been in operation for two years and has proved quite satisfactory. It stimulates both of the participating institutions, and it has some advantages for the student, permitting him to take his elementary course in small classes, often at less cost, and to be an alumnus of the arts college as well as of the university. It was explained that such students are found to more readily take up graduate work.

A comprehensive report as to the preparation of extension workers was made, based on about 100 replies to a questionnaire sent to agricultural educators, extension directors and others in charge of extension work, and others interested therein. The committee advocated that a considerable number of the agricultural colleges offer undergraduate courses for the purpose and that a few make special provision for graduate instruction.

In one of the general sessions Dr. H. L. Russell described a plan for promoting advanced study through exchange with other colleges. This had in mind the postgraduate preparation of men from the institution, and the purpose of the plan as explained was to "avoid inbreeding" and to promote "cross breeding" with other institutions. Dr. Russell believed that not more than one-half of the permanent staff above the assistant grade should be chosen from the home institution. At the University of Wisconsin assistants are required to go elsewhere for advanced study; and to provide for this and meet the financial difficulty which often confronts young men, an exchange relationship has been established with certain other colleges. This cooperative arrangement provides for mutual exchange of staff members, with opportunities afforded for study. The description of this plan developed so much interest that the paper was referred to the committee on college organization and policy, with a view to arranging for a consideration of its suggestions.

American Association for the Advancement of Agricultural Teaching.—The sixth annual meeting of this association was held in

Berkeley, Cal., August 10. The most important feature of the program was a report of the standing committee on "The use of land in connection with agricultural teaching," prepared by the States Relations Service of the U. S. Department of Agriculture. This was based upon a study of the home-project method as followed in teaching agriculture in the secondary schools of New York. In this method each pupil chooses a project for home study before March 1, and after this date most of the time set aside for laboratory work is devoted to the projects. Part of the time is spent in school in reference reading, the drawing of plans, and such other work as may be done to advantage, and as the summer approaches the project work gradually replaces class work. Projects may be grouped according to their chief aim, as production projects, the chief purpose of which is to produce an agricultural product at a profit; demonstration projects, where the chief aim is to demonstrate improved methods or materials; experimental projects, where there is uncertainty as to results; or improvement projects, where students may undertake the improvement of plants and animals, the home grounds, or the farm in general with little hope of immediate returns.

National Education Association.—Rural and agricultural education received unusual attention at the meeting at Oakland, Cal., August 16-28.

In a paper before the Department of Rural and Agricultural Education, C. H. Lane defined the meaning of high-school extension work in agriculture. This comprises all educational efforts at the homes and on the farms of the people and also such work at the school itself as centers directly in interests away from the school. Community work in agriculture is a necessary part of the school that is maintained by the people for the service of the people. He maintained that before attempting extension work, however, the teacher should study the agriculture of the community, the character of the soil and improvements, systems of farming, the class of farmers, and the condition of the rural one-teacher schools and of the churches. The teacher may then extend his work by supervising the home-project work with his pupils, directing agricultural instruction in the grades, organizing and following up boys' and girls' clubs, acting as organizer for the one-week short course for farmers, offering personal counsel and advice on certain days to farmers of the community, assisting and organizing farmers' reading courses, directing school agricultural exhibits locally and at the county fair, and through Saturday meetings with farmers and by farm visitation. He should also have an office in the high school in which facts pertaining to the agriculture of the community may be assembled and where they will be available for the use of any person who desires them. The agricultural teacher would thus be an organizer of in-

formation and of movements and a director of agricultural enterprises within his school community.

American Association for the Advancement of Science.—The two features of the meeting of the section of agriculture of the American Association for the Advancement of Science at Columbus, Ohio, during the Christmas holidays, were the address of the retiring vice president, Dr. L. H. Bailey, and a symposium on "The relation of science to meat production." Dr. Bailey's address was in a sense a continuation of his vice presidential address of last year, the subject being "The forthcoming situation in agricultural work."

To maintain the proper external influences and to carry forward the work through other agencies than the State agricultural colleges, Dr. Bailey advised the extension of rural teaching founded on agriculture into general and liberal arts institutions "to the end that they may be made a means of culture, a force for training in citizenship, and a broadening influence in the institutions"; and he pointed to the opportunity for a new kind of agricultural institution of very high grade, founded on private endowment. Of the latter he said:

This will be a coordinating and leadership institution, teaching advanced and special students in some subjects, engaging in research, but in the main making its contribution as a place for conference, for consideration of the large civic and social relations of rural life, and as a voluntary meeting place on common and neutral ground for all the forces that lie in the situation.

Such an institution would afford "better opportunities than the land-grant or other State-named institutions are likely to give the freest men." It would "conserve the independence and the opportunities of the boldest prophets."

Pan American Scientific Congress.—The Second Pan American Scientific Congress, held at Washington, D. C., from December 27, 1915, to January 8, 1916, devoted part of the time at the disposal of the section on education to agricultural education.

The papers on agricultural education consisted quite largely of descriptions of present plans of organization. Dr. A. C. True, of the States Relations Service, reviewed the system of education for the baccalaureate degree in the agricultural colleges of the United States and subsequently described the extension work under way. President A. M. Soule, of the Georgia College, discussed the extensive work being carried on by that institution in agricultural extension. Some of the national aspects of agricultural education were also taken up by President Waters, who advocated specifically the teaching of agriculture as an informational subject to all school children, both urban and rural.

Prof. José Commallonga y Mena, of the University of Habana, presented a review of the history and status of agricultural education in Cuba, Director Crawley explained the organization and work

of the Cuban Experiment Station, and Dr. Alberto Boerger that of the agricultural station of La Estanzuela in Uruguay. It may be of interest to note that the chief difficulties enumerated by Director Crawley were the scarcity of trained Cubans to carry on the work and the need of an extension system for bringing the results directly to the farmer. Research in Uruguay, it was stated, has dealt especially with studies of the laws of inheritance of plants and animals, grain breeding and culture, and the adaptation of plants to Uruguayan conditions, and international cooperation in adaptation work was suggested as feasible.

The status of forestry instruction in this country was reviewed by Prof. J. W. Toumey, of the Yale Forest School, who regarded the provision of vocational training of secondary grade and opportunity for demonstration work as more essential at the present time than the further development of advanced technical instruction in forestry. A paper by President K. L. Butterfield, of the Massachusetts College, called attention to the responsibility of the agricultural college through its extension service in the present transition period of American agriculture to correlate the various agencies designed to bring about a more complete organization of agriculture and country life, but insisted that education and not management must be the province of the agricultural college or other institutions in this and related matters.

AGRICULTURAL EDUCATION IN OTHER COUNTRIES.

Australia.—The first teachers' farm school in Victoria was held in September, 1915, at the State Research Farm, Werribee, by the State departments of agriculture and education. In the opening address of the school Dr. S. S. Cameron, director of agriculture, stated that it was well known that the agricultural education work carried out in Victoria had been somewhat disjointed, and that while the scheme provided for (1) elementary agricultural instruction in about 500 of the elementary schools, (2) more advanced work in the 12 agricultural high schools, (3) a three-year diploma course devoted solely to agriculture in the agricultural colleges at Dookie and Longerenong, and (4) a full university course for a science degree in agriculture, thus apparently offering an opportunity of advancing stage by stage from the elementary school to a university graduation in agricultural science, so far there was no instance of such a career having been passed through. If this teachers' farm school proves successful, the scheme will probably be developed into the holding of many such schools throughout the year, but devoted to specialization in the various distinct phases of agriculture, such as dairying, cereal culture, fruit growing, sheep husbandry, and irrigation farming.

Canada.—The Saskatchewan education commission, which was appointed May 9, 1912, finds that it is essential in the interests of the Province of Saskatchewan that agricultural and industrial education be amplified and extended by the use of existing agencies, viz., the public, high, and normal schools, and the university, including the agricultural college. It recommends that (1) systematic efforts be made to introduce nature study, school gardening, manual training, and elementary household science more generally into the public schools and to provide in the more advanced schools instruction and training for the preparation of teachers and leaders in these departments; (2) short courses in agriculture and elementary science during vacation periods where necessary be given in rural schools by traveling expert instructors; (3) the establishment of industrial evening schools be encouraged in villages and towns; (4) provision be made in high schools for short winter courses in agriculture and instruction in advanced manual training and household science and such specialized form of industrial work as may be deemed advisable; (5) such work as may be undertaken in public and high schools in school gardening and agriculture, household science, manual training, and related branches be encouraged by initial and annual grants and be placed under expert direction; (6) increased facilities be provided for dealing effectively with approved methods of instruction in school gardening and elementary agriculture, manual training, and elementary household science in the provincial normal schools; (7) steps be taken to establish in the university a school of domestic science and a college of technology for a corresponding development of industrial education; (8) the department of education be asked to accept either agriculture or household science in lieu of physics or chemistry in the examination for third and second class teachers' diplomas, and the university to make a similar departure at the junior matriculation examination; (9) expert district representatives be appointed to assist the department and college of agriculture in promoting the welfare of rural communities.

Latin America.—In 1914-15 there were over 100 gardens in connection with the elementary schools in every part of British Guiana. The number not having varied much in recent years, the probability is that nearly every school having available land suitably situated has its garden. Under a new education code the garden grant is no longer restricted to the pupils of the four higher grades. Every boy between 9 and 14 years of age is now eligible to receive instruction in gardening, irrespective of the class or grade in which he is working; but on the other hand the grant ceases to be available for girls. The maximum grant is \$1.20 per pupil, while under the previous code it was \$1. The nine Government model gardens, originated in

1903 and costing the Government \$2,000 annually, were abolished in March, 1915.

A recent decree of the department of agriculture of the Argentine Government establishes a practical home school of agriculture at Tandil, the first of its kind to be founded in the Republic.

The Government of Chile has appropriated \$9,490 for the maintenance of the agricultural farm and \$8,358.50 for the agricultural school at the Quinta Normal de Agricultura, Santiago.

According to the message of President Alfredo Gonzales, of Costa Rica, to the National Congress on May 1, 1915, the results of the rural agricultural schools have been so satisfactory that the department of agriculture proposes to establish 50 such schools with practical and theoretical instruction and to increase this number as the needs of the country require. A proposed plan for the founding of a school of industrial arts and a school of agriculture in the cities of Alajuelita and Cartago is also being considered.

A rural normal school, the second of its kind established in Paraguay, was inaugurated March 26 last. Stock raising is to be included in the subjects of instruction. The agricultural school at Asuncion has aided greatly in the introduction of improved methods concerning the feeding and breeding of stock in the more thickly populated sections of the Republic and in influencing particularly small farmers to give attention to the question of forage by recommending the cultivation of suitable grasses and legumes for feeding purposes.

EDUCATIONAL WORK OF THE DEPARTMENT OF AGRICULTURE.

Two years have passed since the cooperative agricultural extension act of May 8, 1914, commonly known as the Smith-Lever Extension Act, went into effect. In that period much has been accomplished in creating or perfecting the administrative machinery for carrying on extension work in agriculture and home economics by the Department of Agriculture and the several States. The general lines along which these extensive enterprises will be conducted have also been fairly well determined.

All the States have assented to the provisions of the act either through their governors or their legislatures, and the action of the governors has been ratified by all the legislatures which have been in regular session during the year. A single agricultural college in each State has been designated as the beneficiary of this act, thus providing for a unified administration of the act within the State. In several States where the college designated is not coeducational a cooperative arrangement for the work in home economics has been made with the State college for women, and, similarly, in a few

States having separate land-grant colleges for Negroes a cooperative arrangement has been made for extension work among people of the colored race.

The experience of the past 12 years has fully demonstrated the value of the county agricultural agent as a means of bringing to agricultural people on their farms and in their homes the results of practical experience and scientific research in agriculture and home economics and securing the practical application of these results through demonstrations and otherwise. There is therefore general agreement that nothing is more important in the development of extension features under the new conditions arising from the Smith-Lever Act than the establishment in each county of permanent headquarters for extension work, in charge of a competent county agent, who shall act as the joint representative of the local community, the State through its agricultural college, and the Nation through its Department of Agriculture. It is believed that in this way the need of the agricultural people in their several communities can be best determined, and whatever help the State and the Nation can give them in their agricultural and home problems can be most speedily and effectively brought to them. A large share of the department extension funds, much money derived from State, county, and local sources, and a considerable portion of the Smith-Lever fund have therefore been devoted to the maintenance and extension of the county agent system. There are now over 1,000 counties in the 48 States which have county agents.

Considering the limited number of agricultural college graduates and the numerous avenues for congenial work which are opening up to them, it is not surprising that up to the present time it has not been practicable to obtain a sufficient number of such graduates with the practical experience and other qualifications required for the position of county agent. There will be a steady demand for men of thorough training, combined with satisfactory practical experience, to fill these positions. The colleges have therefore a special duty to train the future extension workers, and it is encouraging to notice that they are beginning to feel their responsibility in this direction.

Another important line of extension work which has been developed in a large way by the Department and the agricultural colleges prior to the passage of the Smith-Lever Act and which has been carried over into their new extension organizations is the boys' and girls' club work. In the Southern States this enterprise is organically associated with the county agent work, but in the other States it has a more separate organization. Through the club work the extension agencies are brought into close touch with the State

and local officers and teachers, who largely cooperate in the formation and management of the clubs. This has raised many interesting questions regarding the relations which the club work might or should sustain with the regular school instruction in agriculture and home economics. For example, is it practicable and desirable to consider the club work as in the nature of a home project for the pupils and to give school credit for this work? Undoubtedly such questions will require much consideration by the extension officers in the future.

There are a total of 62,922 boys enrolled in the corn clubs in the South, with an average production of 51.37 bushels per acre. In addition to corn clubs, it has been found advisable to organize boys in western Oklahoma and Texas into kafir, milo maize, and feterita clubs. A few cotton clubs have been organized for the purpose of teaching boys how to make the greatest yields at the lowest cost. In 1914 peanut clubs were organized in Virginia. Potato clubs are organized wherever there is a demand for them. The office of extension work in the South of the States Relations Service, in cooperation with the Bureau of Animal Industry, has organized pig, poultry, and baby beef clubs. Further mention of these clubs will be given later in this chapter.

According to States Relations Service Document 27—

The best results are generally obtained when the following plans are followed in a county: (1) The local teacher organizes the club and sends the names and addresses of the boys to the county agent of the farmers' cooperative demonstration work. In case there is no county agent in the county, the teacher sends the enrollment to the county superintendent of education. (2) The county agent, in cooperation with the county superintendent of education, directs the work in the county, holds county meetings, formulates the county rules, and settles all county contests. He receives the names and addresses of the boys from the local teachers, makes copy of the same for his office, and sends copy of names and addresses to the county superintendent of education and to the State agent in charge of boys' agricultural clubs. When there is no demonstration agent in the county the county superintendent sends the names and addresses to the State agent in charge of boys' agricultural clubs.

Demonstration work for the girls and women began in the Southern States with the canning clubs. In 1910 only 4 counties and 2 States were organized. In 1915 there were 368 counties with women county agents. They gave instruction to 32,613 girls and direct instruction to 6,871 women. Each of the girls produced a one-tenth acre home garden of tomatoes or tomatoes and other vegetables. They put up 2,166,515 cans of fruits and vegetables, estimated to be worth \$300,000. The average profit per member was \$24. Instruction was also given in the raising of poultry, marketing of eggs, making of butter, keeping of milk, preparation of food for the

table, baking of bread, etc. In the girls' work the women county agents held 10,784 public meetings, attended by 409,283 persons. In the poultry clubs there were enrolled 9,854 members, and 3,062 members in bread clubs. In the work for adult women special attention has been given to labor-saving devices, such as simple home water works, screening of houses, making of fireless cookers and iceless refrigerators, construction of wheel trays, fly traps, etc. There were 6,871 women demonstrators who did some line of work in their own homes in the way of home improvements. Two hundred and fifty women's community clubs were organized. In the meetings held for the purpose of instruction there was an attendance of 74,335 women. In a number of counties in Texas, Mississippi, Oklahoma, Virginia, and Louisiana, special effort was made to teach farm women to market eggs by organizing egg circles and cooperative egg-selling associations. These were very successful.

In the 33 Northern and Western States during the past year 209,178 boys and girls were enrolled in boys' and girls' club work, etc., of whom 127,882 did the work as outlined and directed by leaders. Of this number 82,264, or 64 per cent, not only completed the work but rendered complete and certified crop reports, as required by the leaders. Of the total number doing all the work required, 24,299 were engaged in productive projects or profit-making enterprises, in which they produced a total value of \$509,325 worth of food products.

The 50 cooperative leaders employed in 28 States secured the cooperation and local leadership of 11,478 people, who assumed responsibilities over local groups and clubs. The cooperative leaders conducted 1,670 canning demonstrations, with a total attendance of 156,580, and field meetings numbering 3,829, and, in addition to this, visited 27,733 club plats. Cooperative leaders at the colleges of agriculture furnished and distributed 2,108,456 pieces of club instruction, while the Department of Agriculture furnished 1,140,146 pieces.

Reports from 3,155 homes where the canning-club instructions were used show 546,515 quarts of fruits and vegetables canned during the past year, about half of which was vegetables, windfall apples, and other food products of the farm and garden which frequently go to waste for want of a remunerative market.

The bankers in many States are realizing the value of pig-club work as a means of materially improving rural conditions. Not a few of the bankers have made it possible for worthy club members to secure pigs on their personal notes. In this way a well-bred pig is secured and the member can pay for it from the proceeds of the pig as a meat animal or from the sale of offspring in the case of a breeding animal. The member enters into a business agreement

(with the parents' consent) with the banker and is in this way relieved of the stigma of charity, which is the result when a pig is given outright. This arrangement is a practical means of teaching business methods to the rural young people. It is also a character-building process.

Pig-club work has been carried on by the bureau during the past year in cooperation with the State agricultural colleges of Alabama, Arkansas, California, Georgia, Indiana, Kentucky, Louisiana, Massachusetts, Nebraska, North Carolina, Oklahoma, Oregon, and Texas.

Boys' and girls' poultry clubs have made rapid progress in the States of Georgia, Kentucky, Tennessee, North Carolina, South Carolina, and Virginia. The State of Virginia was the first to organize poultry clubs, and the result at the end of the first year's work in 1913 was 137 members in 11 clubs in 4 counties. This is to be compared in 1915 with 692 members in 76 clubs in 17 counties. In these 6 States 95 counties, 328 clubs, and 3,337 members were included in the organization, with prize money distributed at the various fairs to the extent of \$1,458.74.

The chief of the Forest Service reports that special cooperation was extended during the year to the State normal schools of California to help them in the teaching of elementary forestry. Lectures were delivered before their faculties and students on the importance of forests to the State and ways in which teachers can help in promoting the care of forests. Publications, lantern slides, and other educational material were furnished to them. At the State normal school at San Diego several courses of lectures were given by members of the Forest Service on various subjects in elementary forestry, and working out of plans of the best methods of teaching the subject were begun in cooperation with members of the faculty, to be completed during the remainder of the calendar year. Several lectures were delivered before other schools and before teachers' meetings throughout the State.

More than 1,700 lantern slides were loaned to 386 persons engaged in educational work; 68 photograph exhibits and 104 wood exhibits were loaned to schools and libraries; and more than 1,300 photographic prints were loaned, given, or sold for educational purposes.

The division of agricultural instruction of the State Relations Service undertook a project in cooperation with this bureau which has to do with the study of the methods of organization and administration of instruction in agriculture in public schools, the training of teachers for this work, and the relationship of different agencies promoting such instruction. Under this second project the division has held in cooperation with the bureau three sectional con-

ferences on agricultural education dealing with the problem of teacher-training in land-grant colleges. The aim of the conference for the Southern States was to work out a tentative course which may be taken as a guide for training teachers in agriculture, and when revised and tested may be made the basis of licensing teachers in lieu of the present required examinations.

The series of bulletins on elementary agriculture for the rural schools begun last year by this division, in cooperation with State agricultural colleges, experiment stations, and State departments of education, has resulted in the issuing of such bulletins for the schools of Maryland and Wisconsin. Similar work has been completed for the schools of Mississippi, and a bulletin for the rural schools of Vermont is in process of preparation. Other publications issued during the year dealt with "Lessons in elementary agriculture for Alabama schools," "Correlating agriculture with the public-school subjects in the Northern States," "Lessons on cotton for the rural common schools," "Exercises with plants and animals for southern rural schools," and "Home projects in secondary courses in agriculture." A publication dealing with the methods of teaching soils in land-grant colleges is in process of preparation, and a manuscript was prepared dealing with "Lessons on tomatoes for rural schools."

Nine numbers of the *Agricultural Education Monthly* were issued, dealing, among other things, with such subjects in secondary agricultural instruction as "Methods of teaching agriculture in secondary schools," "Use of illustrative material in secondary schools," "A simple method of cataloguing agricultural literature suitable for the school or home library," and "Professional improvement for teachers of agriculture."

The division began during the year the preparation of brief pedagogical statements on how to use in the teaching of agriculture in rural schools certain *Farmers Bulletins*. Eight have been issued.

At the request of the Mississippi State Department of Public Instruction, the division has begun the adaptation of the four units of agriculture outlined for the accredited high schools in the South to the Mississippi county agricultural schools.

The problem in agricultural education studied in cooperation with the Association of American Agricultural Colleges and Experiment Stations was the credit to be given work in agriculture in secondary schools by land-grant colleges and also the extent to which courses now offered by land-grant colleges may be as well given in secondary schools.

In addition to making a study of the problems of visual instruction in agricultural education, sets of lantern slides have been added to

those already in service. One set is worthy of special note, in that it deals in detail with school-garden work in connection with teacher training in a normal school, featuring how this work may be correlated to the extent of vitalizing such subjects in the course of study as arithmetic, drawing, and language.

Card indexes of the world's literature of agricultural education, as well as of American and foreign institutions for agricultural education and instruction in home economics, were maintained by the division.

CHAPTER XV.

SCHOOL AND HOME GARDENING.

By J. L. RANDALL,

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SIGNIFICANCE OF THE INTRODUCTION OF GARDENING.

School and home garden training has become an educational activity in so many cities and towns as to merit special consideration in a review of education for the year. The attempt to project the school influence outside of the four walls into the home and real life of the people is a significant trend toward a new and more complete type of city education of which gardening will become a part.

WHY GARDENING IS NEEDED.

That there is an educational unrest and demand for school reorganization in cities is shown by the many recent investigations and surveys. To understand why gardening is needed in this reorganization it is only necessary to study the census figures of the United States and note the change that is rapidly coming about in the living conditions of a large part of the people. Since the days of colonization the United States has been essentially a rural nation, but each succeeding census brings out the fact that new industrial conditions are forcing more and more of the population to live in cities, until at the present time more than half (52 per cent) are living under urban conditions.

With this change in living conditions there has not been a corresponding change in school organization. The school year, with its long summer vacation, was planned that the farm boy and girl might help with the planting, cultivation, and harvesting of crops. After school hours and during the vacation the country boy had good, healthy, out-of-door work. The child having such regular work forms early the habit of industry and gains a knowledge of purposeful, productive occupation which is educative. To this early education is often attributed the success of the farm boy when he enters the competition of the city.

In his paper on the "Changes needed in American secondary education" Dr. Eliot declares:¹

The boy on the farm has admirable opportunities to train eye, ear, and hand, because he can always be looking at the sky and the soils, the woods, the crops, and the forests, having familiar intercourse with many domestic animals, using various tools, listening to the innumerable sweet sounds which wind, water, birds, and insects make on the countryside, and in his holidays hunting, fishing, and roaming.

Increasing skill in the use of the hands and fingers has undoubtedly had much to do with the development of the human mind ever since man first stood erect and set free from foot work his fingers and their opposing thumb. One of the best methods of developing the minds of children is practice in the coordinated activities of the brain and the hand. If brain, eye, and hand are cooperating, the developing mental effect is increased, and the mental action and reaction is stronger still when eyes, ears, and hands, and the whole nervous system, the memory, and the discriminating judgment are at work together.

In the city, on the other hand, when the school doors close for the summer vacation, the child has no large field of useful occupation to which to turn his energies. About 5 per cent of the city children are away from home during the vacation months or are with parents at summer resorts or visiting in the country. Something less than 10 per cent are employed near home in healthful occupation suited to childhood, while the other 85 per cent remain at home, without proper employment for any large part of their time. Many of these children at the close of school wander about aimlessly and often form themselves into gangs, and give outlet to their energies in ways that are not acceptable to other members of the community or beneficial to themselves. The littered, desolate back lot and alley are not environments that lend themselves to character building. Amid such surroundings the vilest habits are often formed, and what are at first simple quests for fun are turned into crime.

In another part of his paper Dr. Eliot refers to the changing needs in city education as follows:

The great increase of urban population at the expense of rural which has taken place during the past 60 years, with the accompanying growth of factories and the crowding together of the working people and their families, has resulted, so far as schools and colleges are concerned, in placing more children and youths than formerly under the influence of systematic education and keeping them there for a longer period; but this improvement has been accompanied by a decline in the amount and quality of the sense-training which children and adolescents have received. An increasing proportion of children goes to the high schools, academies, and colleges, but the farm now teaches but a small proportion of the children born to the Nation, and the urban family can not train the children's senses in so effective and wholesome ways as the rural family could.

¹ Bulletin, 1916, No. 10; also General Education Board, Occasional Papers, No. 2, 1916.

In cities and large towns the trade which a boy chooses, or is assigned to, no longer demands for admission a prolonged apprenticeship. Machinery turns out an ample product without the need of much skilled labor. The general result is an inadequate training of the senses of the rising generation for accurate and quick observation. Unfortunately, the schools, which might have come to the rescue of the children, have for the most part clung to the traditional programs which rely chiefly on studies that train the memory and the powers of discrimination and analysis, but do not drill children in seeing and hearing correctly, in touching deftly and rapidly, and in drawing the right inferences from the testimony of their senses.

EARLY HISTORY OF GARDENING.

The school-garden movement had its inception in the desire of city educators to provide employment for city children and also to add a subject to the curriculum from which knowledge might be gained through doing. It is interesting to note that the school garden was first started, and has taken firmest hold, in large cities. People feel the keenest desire for things when they have lost them. As cities become more and more congested, parents feel more strongly that their children should have greater opportunity for out-of-door exercise and first-hand contact with nature. Children's gardens were first started in European countries. As early as 1814 some of the German States introduced the study of production of vegetables and fruits in their school courses. In 1869 both Austria and Sweden, by royal edicts, took up the school-garden movement. France, Russia, Belgium, and England have also taken steps to start school gardening by requiring that all schools using public funds must teach children to cultivate gardens of vegetables and flowers. Canada is now engaged in introducing gardening in all her city and rural schools.

The first school garden in the United States was started at Roxbury (now a part of Boston), Mass., in 1890. From this beginning, the school-garden movement spread rapidly, and during the following 10 years many cities became identified with it. One of the early gardens that has been a decided success from the beginning was started by the National Cash Register Co., of Dayton, Ohio. In describing the reasons for starting this garden, the president of the company said:

After an investigation of the successes and failures of the men who had been boys with me, I was impressed by the fact that there had been scarcely a failure among those boys who had been responsible for some farm or garden "chores." I decided that in a very rough neighborhood I would make the experiment of using the surplus energy of the boys in practical garden work and let them have the products of their steady work and business energy. So gratifying was the result that the garden is to-day a marked feature of the welfare work for the employees of the National Cash Register Co.

PRESENT STATUS OF GARDENING.

Statistics collected by the Bureau of Education show that the larger part of the city school superintendents of the United States are now encouraging gardening among the children of their schools. Reports have been received from 1,572 city superintendents, of whom 1,220, or 78 per cent, are encouraging some form of school-directed gardening. In some cases encouragement means simply talks on gardening by teachers and principals or the distribution of seeds and bulbs. In other cities, including practically all of the large cities, garden plats are maintained at the school building, and the teachers either give their services or are paid a small additional salary for the extra work in the garden. In still other cities complete departments of school and home gardening or of gardening and nature study are maintained and separate appropriations set aside for the work. The more rapid promotion of garden teaching by the schools is prevented by the tendency to adhere to traditional subjects, the lack of school funds, and the small number of well-trained teachers who can be employed for a salary in keeping with that now paid in the elementary schools.

Traditional influence.—The influence of tradition is well stated by Dr. Abraham Flexner in his paper, "A modern school":¹

A certain amount of readjustment has indeed taken place; in some respects almost frantic efforts are making to force this or that modern subject into the course of study. But traditional methods and purposes are strong enough to maintain most of the traditional curriculum and to confuse the handling of material introduced in response to the pressure of the modern spirit. It is, therefore, still true that the bulk of the time and energy of our children at school is devoted to formal work developed by schoolmasters, without close or constant reference to genuine individual or social need. The subjects in question deal predominantly with words or abstractions, remote from use and experience; and they continue to be acquired by children because the race has formed the habit of acquiring them, or, more accurately, the habit of going through the form of acquiring them rather than because they serve the real purposes of persons living to-day. Generally speaking, it may be safely affirmed that the subjects commonly taught, the time at which they are taught, the manner in which they are taught, and the amounts taught are determined by tradition, not by a fresh and untrammelled consideration of living and present needs.

School appropriations for gardening.—While many school officials have shown a keen interest in children's gardening, the subject has had to prove its value without being given generous financial support. During the last few years the school boards of several cities have made substantial provision for gardening in their annual budgets.

¹ General Education Board, Occasional Papers, No. 3, 1916.

The amount of money spent last year by 20 cities for gardening is given in the following list:

Philadelphia, Pa.....	\$19,893	Birmingham, Ala.....	\$1,284
Los Angeles, Cal.....	19,000	Brockton, Mass.....	1,200
Cincinnati, Ohio.....	8,100	Framingham, Mass.....	1,200
Pittsburgh, Pa.....	6,700	Hartford, Conn.....	1,200
Kansas City, Mo.....	5,000	Marshall, Tex.....	1,200
Chicago, Ill.....	4,000	Milton, Mass.....	1,200
St. Paul, Minn.....	3,450	Pasadena, Cal.....	1,050
Portland, Oreg.....	2,500	Marlin, Tex.....	1,000
Crockett, Tex.....	1,500	Minneapolis, Minn.....	1,000
Cleveland, Ohio.....	1,300	Tampa, Fla.....	1,000

Twelve other city superintendents report expenditures ranging from \$500 to \$1,000, while 108 spent less than \$500 on school or home gardening. Many of the reports on school-directed gardening were indefinite in regard to the methods of financing the work, but it is apparent that while many boards of education have made no special provision for gardening, the superintendents are authorized to use part of the general school fund for the purpose. In some towns and cities garden teaching is made part of the duty of the regular teacher, and funds are not charged to gardening as a special subject. The total expenditure for gardening by schools last year was \$126,680, but complete returns would increase this amount by about one-third.

Teacher training.—One of the greatest handicaps to the rapid extension of school-directed gardening is the lack of well-trained teachers. If gardening is to be introduced into all the cities, towns, and manufacturing villages of the United States, something over fifty thousand teachers will be required. This does not mean that 50,000 extra teachers should be added to the present force, but rather that it would be necessary to require a different preparation for one teacher in each school.

The larger part of the State normal schools of the country give courses in elementary agriculture and nature study. The greater number of city school superintendents state, however, that none of the teachers now employed are trained to direct children in gardening in the practical way in which it should be done. It is the duty of the State normal school to train the elementary teachers of the State, and as superintendents are now demanding teachers with special qualification for garden teaching, these schools should meet the requirement.

GARDEN PROMOTION BY AGENCIES OTHER THAN THE SCHOOLS.

Children's gardening has been started in many cities by organizations other than the schools. Garden campaigns have been financed

by city councils, chambers of commerce, civic clubs, women's clubs, etc. In New York City \$20,000 was appropriated last year by the borough council. Children's gardens were conducted in Pittsburgh, Pa., by the Pittsburgh Playground Association for six years by funds appropriated by the city council and received from private subscriptions before the work was taken over by the public-school system. The Syracuse (N. Y.) Herald as early as 1904 conducted a successful campaign for home gardening among children. Many industrial concerns have also conducted children's gardens as a part of their welfare work. Notable among these are the National Cash Register Co., of Dayton, Ohio, previously mentioned; the Carnegie Steel Co., of Duquesne, Pa.; and the Tennessee Coal, Iron, and Railway Co., of Birmingham, Ala. It has been impossible to obtain a statement of the money spent by these concerns for gardening, but the total for the country would be large.

In some cases public-spirited citizens have contributed liberally to the support of children's gardens. Such support, however, has usually been in the form of prizes for individual achievement. Many successful examples of garden work are the result of individual efforts of conscientious, far-sighted teachers, who voluntarily have undertaken the work without financial support. They have contributed liberally their time and sometimes their means in order to give the children in their charge an opportunity to share in this wholesome and elevating activity. They freely admit, however, that their efforts are not wholly devoid of personal interest, for they claim that children engaged in gardening are more easily taught and governed. It is interesting to note that 220 cities have available funds of varying amounts coming from voluntary contributions. The total amount available from this source is \$22,642.

The School Garden Association of America.—Through the activities of a committee appointed in 1910, the School Garden Association of America was formed as a section of the National Education Association at the San Francisco meeting in 1911. The association filled a real need, as shown by its growth to a membership of 415 by the end of 1912. Every State in the Union was represented in this membership, as was also the Philippine Islands and one Province of Canada. From this beginning the association has grown steadily and now has added to its list of members the larger part of those persons in the United States who are interested in garden education for children; and it also has representatives in Porto Rico, Philippine Islands, British Columbia, New Brunswick, Saskatchewan, Nova Scotia, New Zealand, Quebec, Ontario, and Prince Edward Island.

Two meetings are held each year, one in connection with the summer meeting of the National Education Association and the other

as a section of the Department of Superintendence of the National Education Association, usually held in February. An annual report is published each year and at the present time a monthly publication dealing with school-garden progress is issued.

SURVEYS.

Gardening has been given careful consideration in several of the recent city school surveys. In the San Antonio survey, garden teaching is strongly recommended as a part of the school activities. The following two paragraphs from this report are significant:

The fundamental aspects of the garden training should be at the homes. There is plenty of space. San Antonio averages only five individuals to the acre. The city is not densely populated. Houses are well removed from each other, and back yards, side yards, front yards, sufficient for flowers, shrubbery, and vegetables are the rule everywhere. There is no lack of opportunity for training in gardening.

The school garden suggests what can be grown, what processes have to be performed, shows the best ways of doing the work, shows to all the pupils how difficulties are to be overcome, furnishes material for laboratory work that needs to accompany the teaching of the gardening science, etc. In a word, the school garden is a small fraction of the fundamental field of gardening that is transferred to the school to be used as a foundation for the supplemental training in the science, design, and other matters of technical information which are then taken back to the home gardens for that serious application which alone accomplishes the education of the children. Their fundamental training must be in connection with these home gardens. The front and side yards will be given to grass, flowers, and shrubbery, ideas and methods having been contributed by the work at the school. In the back yard or in the vacant lots can be developed the fundamental training in kitchen gardening.

In the Minneapolis survey for vocational education a chapter is devoted to "What should the city do for training in home gardening and elementary agriculture?" The history of gardening in Minneapolis is dealt with under four headings: "The garden club movement"; "Gardening projects in the elementary schools of Minneapolis"; "Gardening projects and elementary agriculture in the central high school"; and "Advantages and disadvantages of school, vacant lot, and home gardening." Under the last heading the following conclusions were reached:

(1) *The school garden is of much value* in the introduction of the work and for instruction and demonstration purposes. However, it is merely a means to the end. The enthusiasm of the group is essential to the introduction of the project. Advantage should be taken of the economy offered by group instruction, providing that the dangers from such instruction are carefully guarded.

(2) *The vacant-lot garden offers many attractive inducements* to the children who have the capacity and ambition to undertake enterprises on a large scale. The boy who feels the need of earning money will be attracted to the vacant-lot garden. It will usually attract the stronger and more ambitious. Whenever a

strong, energetic boy can be accommodated with a vacant-lot garden, it is safe to say he will receive a training that will be of great value.

(3) *The home garden is the one which offers the most promising and lasting results.* It should be made the most important part of the movement. The gardening activities will not have reached the highest degree of efficiency until the gardens reach the home yards. The greatest amount of educational value is made possible when the movement becomes a part of the home experience of the family.

At the close of the chapter a tentative plan is worked out for the introduction of gardening in the elementary schools of Minneapolis, dealing with the functions of all the educational forces of the State, having a relation to garden teaching, under the following heads:

(1) How educational forces are cooperating to introduce gardening into the elementary schools of Minneapolis.

(2) How instruction in gardening will be given in the elementary schools of Minneapolis.

(3) The opportunities for agricultural education afforded by the city and State schools systems to the children of Minneapolis.

In Richmond, Ind., a survey of the possibilities of school and home gardening was undertaken as a part of a vocational educational survey of the city. In this survey much attention is given to the economic value of gardening. The findings in the investigation are summarized as follows:

Homes.—Although located in the center of a farming region, the prices paid for vegetables are comparatively high. Prices are standardized by present methods of selling. Considering the low average labor income, the amount spent for vegetable and small fruit foods is large, an average of \$138.87 per year for a family of five persons. About 30 per cent of the families have home or vacant-lot vegetable gardens, but the methods of planting and cultivation are not intensive, and the money value of the product is small. Of all the homes in the city, less than 10 per cent lack space on which to make a practical kitchen garden; 30 per cent have enough land to produce all the vegetables for the family during the productive season of the garden; and in 60 per cent there is enough to produce fresh and canned vegetables and berries for the entire year and, in many cases, to have a surplus to sell. There is enough vacant ground so that all of those who are without land could secure enough for a family garden. In most cases the use of vacant lots can be secured free of charge, but when it has to be rented the price of \$1 per lot is so small that it would have little effect in decreasing the profits.

Schools.—The school year in Richmond is nine months in length and the school day five hours. The children are out of school nearly half of the week days of the entire year and three-fourths of the days of the garden season. On school days less than half of the daylight hours are spent in the classroom. All of the children of the city might have occupations two hours per day on school days and four on Saturdays, holidays, and in the summer vacation and yet have enough time left for play, reading, music, and other special studies. At the present time only 9.1 per cent of the elementary-school children have regular productive occupation during vacation, 7 per cent irregular employment, and 4.4 per cent after school hours. In the Garfield School 19 per cent are engaged in earning money before and after school and 25 per cent during the

vacation. Of the high-school students reporting, only one-fourth have vacation occupation.

Of 889 children in the elementary schools reporting on home garden space, 6 per cent were without home lots, 39 per cent had an average of 400 square feet, and 55 per cent had 1,000 or more square feet.

In several cities where home gardening was conducted under the direction of the public schools, the children were able to produce a net profit of 10 cents per square foot. The children of the nine elementary schools of Richmond should be able, on the basis of the number of square feet reported, to earn from their gardens a total of \$62,820, or an average per child of \$70.66. The home garden income from the 516 reporting from the Garfield School would be \$34,740, or an average per child of \$67.32.

In some cases the same land has been reported on by two children of the same family, one attending the elementary schools and the other the Garfield School. These cases will, however, be offset by the large vacant tracts, of which no account has been made, and while the figures may seem large, there is little doubt that each public-school child of garden age may produce enough to reduce the cost of vegetables in his home to half the present cost.

A comparatively large number of children leave school each year, some because they need to earn money toward the support of the home and others because school subjects do not interest them. The earnings of these children are small, and the earning powers might be much increased if a more complete education were received. The number of cases of juvenile delinquency and truancy is very much greater in the city than in the country. With each industrial depression, city families turn to the country to seek a means of livelihood. Agricultural instruction is not given in the schools, and thus the younger pupils do not become interested in the subject; older students are unable to pursue the subject vocationally, and those who, from financial necessity, seek the country have a small earning power and are unable to adapt themselves to country life.

The beauty of the city might be much increased if the citizens were familiar with the methods of cultivation and care of decorative plants.

SCHOOL AND HOME GARDENING DIVISION OF THE BUREAU OF EDUCATION.

Believing in the need for and possibilities of home gardening under the direction of the public schools, Dr. P. P. Claxton, Commissioner of Education, asked for and received an appropriation from Congress to establish a division of school and home gardening in the United States Bureau of Education. In this division three specialists are now at work, one devoting entire time to the Northern States, another to the States of the South, and a third dividing time between the two sections. At the present time these specialists are engaged in assisting superintendents of city schools to establish departments of school and home gardening in their school systems.

In following the plan of the Bureau of Education school officials are asked to employ one garden teacher for each 200 children of garden age. This teacher should be employed for 12 months; and after school, on Saturdays, and during the summer vacation she should instruct the children in the active planning, planting, culti-

vating, harvesting, and marketing of vegetables grown in the back yard or on vacant lots. After several years, when intensive vegetable culture is well understood by many of the children, the work may be extended to include the growing of berries and fruit for home consumption and for canning. Still later the children should be taught the methods of growing flowers and shrubs for home decoration.

The home garden teacher may be one of the regular grade teachers, but in all cases she must continue her work during the summer months. A more ideal plan would be to make this teacher a special instructor of nature study, elementary science, and gardening, in order that she may visit all of the upper grade rooms and give garden instruction during school hours.

It is believed that the removal of the garden to the home will not decrease its educational advantages. With a special, trained school-teacher in charge of the gardens, more children will be enabled to take up the work than ever before, and all the lessons that have been taught in the small school garden may be continued and may have added to them a purposeful productive education from which habits of industry will be formed.

GARDENING IN PORTO RICO.

An idea of gardening progress in Porto Rico can best be given by quoting the following paragraphs from the report of the commissioner of education of the island for the fiscal year ending June 30, 1915:

The beginning of the school year 1913-14 saw agriculture made an obligatory subject for all boys enrolled in grades 6, 7, and 8 of the urban schools and for all boys in the rural schools who were physically able. Ten thousand dollars was spent in buying over 1,000 sets of tools, each set composed of 16 hoes, 8 rakes, 6 hoe forks, 2 spades, 3 spading forks, 1 pick mattock, and 1 garden plow. These were distributed to the schools. Forty-one special teachers of agriculture were provided for by the legislature in the budget, and these teachers were carefully chosen and trained during the summer under the direction of the general supervisor. These special teachers worked indefatigably, both in the urban centers and in the barrios. They had much to discourage them—a corps of teachers untrained in agriculture, lack of suitable ground belonging to the school, the distrust and at times open hostility of the patrons, and many other obstacles. The year closed with satisfactory results, however, considering the magnitude of the problem. A good start at least had been made.

The school year 1914-15 opened with the 41 special teachers of agriculture eliminated from the budget. This meant the elimination of agriculture as a required subject in the urban schools, except in those centers where a teacher of the graded corps took a special interest in the work and desired to do something after school hours. In 20 towns work in agriculture has been carried on spasmodically, and reports state that 807 pupils have been given some instruction. The average amount of land under cultivation in these 20 towns was

seven-tenths of an acre, and the total value of produce raised was \$4.55. Reports state that 267 pupils in these 20 towns had home gardens. Some of these were good and others poor.

Many teachers and influential people of the island feel that the curtailing of the garden work is a great mistake, and there is little doubt of the reinstating of the complete plan.

SCHOOL AND HOME GARDENING IN THE PHILIPPINE ISLANDS.

In the Philippine Islands the introduction of gardening was not hampered by tradition. With the coming of the first American teacher in 1901 there came a new era in labor standards and added emphasis on better home surroundings and food conditions. Industrial training, of which gardening forms a large part, has been required in all elementary schools since 1905. More than 100,000 pupils were engaged in gardening during the school year 1914-15, and more than 43,000 pupils had home gardens which were kept producing throughout the year as required school work. A definite idea of the plan of this work is given in the fifteenth annual report (1914) of the director of education of the islands, as follows:

Gardening in the form of caring for the lawn and ornamental plants on the school premises is required of all schools. Each boy in the primary grades who is physically able is required to have a home garden, the area of which must be four times the amount of land cultivated by him at school, 20 square meters being the minimum requirement. The home work of pupils is inspected and credit toward promotion given. The selection and saving of seeds and the growing of the native vegetables liked by the people of the community are emphasized. In the general course and the course in teaching, advanced gardening is studied in one or more grades. Nursery work is a feature of all intermediate school gardening.

SCHOOL GARDENING IN CANADA.¹

A report on the care of school gardens during summer vacation in Canada shows that in Prince Edward Island, where the schools close June 30 and reopen August 9 and where the teacher is paid a bonus for a well-kept school garden, teachers who start school gardens are held responsible for their garden. In the Province of Quebec children must attend to the garden during the summer vacation at regular hours appointed by the school authorities, once or twice a week, accompanied by a guardian; in small schools which are far away from the village children harvest their products, consisting of early vegetables, at the end of the school year; in places where the teacher spends the summer in or near the school an excursion of teacher and pupils to the garden may be arranged;

¹ Prepared by C. H. Lane, States Relation Service, United States Department of Agriculture.

where the teacher must leave the school a club of children gardeners may be organized in June, with a trustee or, preferably, a farmer acting as patron and accompanying the children to the school once a week at an appointed hour. Some teachers arrange for home gardens instead of school gardens, all plats being visited two or three times during the vacation by the teacher or school trustees. In the Province of Ontario teachers and trustees are warned not to begin a garden unless they are certain it will not be neglected during the summer vacation. Where previous experience has shown that a garden can not be expected to continue successfully during the vacation, it is advised that the ground be seeded down. Where the garden is to be undertaken for the first time the best security for care will be the community interest—parents, trustees, the local branch of the women's institute, and ex-pupils should be consulted in the work. In Manitoba many children regularly visit their plats during vacation and keep them in condition; many parents also visit the garden; the trustees of many schools meet Saturday afternoons and round up the village children to accompany them to the school grounds to perform the necessary weeding, etc.; in some schools committees are appointed for each week of the vacation, each committee in turn being held responsible; competitions and exhibitions both in rural localities and in town have solved the weed problem in hundreds of districts. As between the methods of placing all the responsibility for the vacation care of gardens upon the pupils or relieving them of all responsibility, the director of elementary agricultural education of British Columbia advocates a middle course by making two definite appointments at the close of the school in June, viz, (1) a garden day (or half day) to be observed by the pupils weekly during the months of July and August, and (2) a garden manager or supervisor who will be in attendance at the garden that day of each week in succession. He should be appointed by the school board, and should be not only in sympathy with the work, but also conversant with the teacher's method of conducting it. In a small garden three hours a week, preferably in the morning, will be sufficient, but in large gardens eight hours a week may be found necessary. One hour a week is usually sufficient for each pupil to spend in actual garden work.

CHAPTER XVI.

HOME ECONOMICS.

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INTRODUCTION.

The efforts of educators throughout the country to direct the education of girls toward preparation for home making have begun to show fruition in many ways. An interest in the work of the home maker has been awakened in a measure in all classes of society and among women of all ages. Women have begun to prepare themselves for many of the vocations related to home making. In the schools special courses to cover these new lines of work have developed. While there has been a steady increase in the number of schools offering instruction in home economics and in the length of home economics courses, the most marked advance has been in the type of course offered and in the standards of instruction that have been established. Some schools continue to be satisfied with a home economics department that does not rank with other courses offered and that plays no rôle in the life of the school. However, State legislation, faculties that appreciate the relation that home education bears to general education, and popular sentiment are making very definite demands of the schools, and a high grade of home economics teaching is resulting. Material aids have never been so numerous as at the present time, and the wide-awake teacher finds illustrative and literary material that will be of assistance for almost every subject that she expects to teach. Moreover, she is learning that her best laboratory is the home, the shop, and the market of her immediate community. Therefore she is striving to tie up her work to the problems at hand. Schools of education and systems of city supervision are going to be the most potent factors in the development of educational methods in home economics, while colleges and universities are developing the subject matter in its scientific and economic relationships. Many of the smaller schools have been handicapped by the lack of trained teachers and inadequate funds. Where the earnestness of the teacher has been great enough to demand

better conditions for home economics teaching, the smaller schools have contributed much toward the development of the movement.

There are before Congress two bills of special importance to those interested in home economics: The so-called Smoot bill, for the support of organized home economics experiment stations, and the Smith-Hughes bill, making appropriations for the assistance of teacher-training in home economics and the encouragement of vocational education.

HOME ECONOMICS IN THE SURVEYS.

An indication of the attitude of mind of those interested in educational questions may be observed in the position assigned to home economics in several of the recent educational surveys. Home economics received special consideration in the survey of Iowa's higher educational institutions. In the survey of San Francisco's public school system the entire time of one investigator was devoted to those lines of work intended to train girls in the art of home making. To the subjects of "household arts and school luncheons" was given an entire monograph in the Cleveland survey.

In the survey of the Iowa State-supported institutions of higher education the effort was made to define the functions of home economics in land-grant colleges, State universities, and State normal schools where these institutions are not directly connected nor located upon the same campus. The commission declares:

In view of reasons elsewhere set forth in this report the commission considers it unwise to develop at the State university courses in home economics leading to degrees. The proper function of the department in the scheme of university instruction should be that of a service department. Because of both its practical and its cultural value, the continuance of home economics on this basis is amply justified in any institution frequented by women. That courses in the subject not only afford useful training in the arts and sciences involved in the maintenance of efficient homes, but that their content tends to broaden and humanize the experience of women students is commonly recognized. A certain amount of duplication in the fundamental lines of home economics teaching between the university and the State college is naturally unavoidable, as in the case of English and mathematics and other subjects generally held to be indispensable in both liberal and technical curricula. Unwarranted duplication can be prevented if the university department is kept from expanding beyond the limits of a service department.

Having regard to the definite differentiation of the university department from the department at the State college, where home economics constitutes one of the major lines of work, the development of courses for the training of high-school teachers of home economics should not be encouraged at the university. But there is another field which the university department, as it expands, may enter legitimately and consistently with the principles here enunciated. Although the demand for trained women as prescribing dietitians is new, it will apparently soon be considerable. If the State desires to create such courses they should be connected with the home economics department at the university.

This is not to be understood, however, as implying a recognition of professional courses in home economics at the university. The conjunction at the university of a department of home economics with a hospital and a medical school of the first rank presents an unusual opportunity for the development of this type of instruction.

In considering the work at the land-grant college, the following statements were made:

There are certain directions in which the division of home economics may be developed logically and consistently with the principles already emphasized in this report. The State board may appropriately encourage the enlargement at State college of facilities for preparing women for various positions of responsibility in dormitories, tea rooms, hospitals, and cafeterias. To this end it seems desirable that the college cafeteria be placed under the charge of the home economics division and as far as possible used as a practice place. The training of hospital dietitians, however, appears, in view of the considerations already mentioned, to be more fittingly the function of the university department of home economics in conjunction with the university hospital. The commission recommends that effective cooperation between the home economics division and the authorities in charge of women's dormitories be established. In addition to training high-school teachers of home economics, a task to which the State college is already committed, the institution may well respond to the growing demand for the preparation of teachers of this subject for trade and industrial schools.

There may be local or geographic conditions which will make necessary the modification of this pronouncement, but without question certain policies relating to the function of home economics instruction should be evolved. Many schools may frankly withdraw all attempts at teacher training in home economics and offer their courses in this subject as material properly finding placement in any or all plans of study prepared for women students.

Continued efforts have been made to lift the college and university courses in home economics to a higher level. It is the desire of many teachers to establish the requirements of one or more years of high-school home economics for entrance to the college courses in that line of instruction. Were this requirement made, it would open the college courses to more liberal courses in the sciences and at the same time give merited recognition to the excellent instruction now given in high schools.

HOME ECONOMICS IN COLLEGES AND UNIVERSITIES.

While certain courses usually classified under home economics have been offered at the University of California for several years, the fall semester, 1916, begins the existence of a definitely organized department of home economics. The courses will be of university grade and will be of the highest standard of work in home economics.

The summer school of 1916 of the University of California offered degree courses in home economics for the first time. The previous

summer-school courses in both food preparation and garment making were of college entrance grade only.

Johns Hopkins University has maintained for the past two summers regular courses in home economics designed to prepare the students for teachers' certificates specified by the recent Maryland law. Some of these courses not only meet the State-law requirement, but credit toward a B. S. degree of that institution.

The University of Georgia maintains well-organized summer courses in home economics, though only men are in attendance during the regular school year.

A department of home economics has been recently established in the University of Oklahoma, Norman, Okla.

Texas Christian University, located at Fort Worth, Tex., has inaugurated a new course in home economics.

The Curtis School of Home Economics at Akron, Ohio, is a unit of the Municipal University of Akron. This school is now offering a four years' course in home economics based upon a 15-unit entrance requirement.

The National School of Domestic Arts and Science, of Washington, D. C., has started the erection of a series of college buildings which call for the expenditure of a million dollars.

The Mother Craft School, New York, of which Miss Jean Read was in charge, closed its doors during the year. A reorganization is to be effected during the coming year.

The Polytechnic Institute of Auburn, Ala., which is the land-grant college for white students of Alabama, has a well-equipped laboratory in which instruction in home economics is given to summer school students.

The University of Louisiana inaugurated a department of home economics with headquarters in the new George Peabody Building at the opening of the fall semester, 1915-16.

At the third "Merchant short course" of the University of Kansas, given under the auspices of the university extension division at Lawrence, February 7 to 11, 1916, an audience varying from 100 to 250 men listened appreciatively to the daily talks given by the home economics department.

In the Connecticut College for Women, which has completed its first year of work, special attention has been given to the dietetics laboratory.

CONFERENCE OF HOME ECONOMICS TEACHERS EMPLOYED IN LAND-GRANT COLLEGES.

The Commissioner of Education issued a call for a conference of home economics teachers in land-grant colleges to be held in Berkeley,

Cal., during the week of the annual meeting of the American Association of Agricultural Colleges and Experiment Stations. This conference lasted for three days, and each meeting was attended by about 40 home economics teachers. The interrelation of high-school courses in home economics and college courses in the same group of subjects; the more adequate preparation of teachers for secondary school positions; the assistance which the college may give to the teachers in the rural school; and the relation of extension service to the home economics college departments, were the subjects especially considered.

The sense of those in attendance was that such meetings should be held in the future and that a request be made to the officers of the American Association of Agricultural Colleges for recognition and the establishment of a section of that association to be devoted to the consideration of home economics questions.

PRESENT STATUS OF HOME ECONOMICS IN NORMAL SCHOOLS.

In addition to the special home economics courses, most of the State normal schools are now giving elective courses in home economics for those who desire to make preparation to become special teachers, or for those who wish to take some courses that will give them a broader perspective for their general teaching or directly prepare them for housekeeping. The tendency to require a brief course in home economics of all women students in the normal school is growing, particularly in those States in which home economics courses are given in the rural schools and in the graded schools of the small towns. A demand from the men students in the normal schools for a general survey course in home economics is reported from many parts of the country. Such a course has been given during the year at Maryville, Mo., and in the Miner Normal School (colored), Washington, D. C. In many States special courses for the training of home economics teachers are restricted to one normal school in the State. At least 20 of the State normal schools have planned special courses in home economics for the rural teacher, either during the year or in the summer session. At the New Mexico Normal University in East Las Vegas the Spanish-American students have had special training for rural work in home economics.

In those normal schools in which the home economics courses are best developed science courses are required either as prerequisites or as parallel courses. For the brief courses offered to general students there are no science requirements. Courses in economics and sociology rarely appear in the two-year normal-school curriculum.

The home economics courses in some of the normal schools allow electives in order that students may prepare to teach subjects other

than those included under "home economics," since many schools can afford only a part-time teacher of home economics, even though a special teacher is employed; the additional subjects chosen may be from among the sciences which the home-economics student must pursue and in which her training must necessarily be thorough, or they may be such as to prepare her to teach in the elementary grades.

Practice teaching.—In all of those schools in which a special course in home economics is given practice teaching is general, but in most instances the students suffer from not having a wide diversity of courses before practice teaching begins and from their limited opportunity for observation of home-economics teaching in the grades.

In addition to practice schools maintained by the normal school, practice teaching is frequently carried on in rural, grade, and high schools of the community through cooperation with local school boards. Practice teaching is carried on in this way from the Massachusetts State Normal School at Framingham, the Industrial Institute and College at Columbus, Miss., the Chicago Normal College, and one of cookery each week during their last two years in school.

The fields of work upon which graduates of normal schools enter differ according to the locality in which the school is situated. In those States in which home economics is just beginning to be included in the school curriculum, normal-school teachers are in demand for both high-school and grade teaching. Where the work has been longer established and the college degree is required for the high-school teacher, normal schools are only supplying grade and rural teachers, except in those few cases where the normal school offers a four-year course leading to a degree. This serves to restrict the home-economics course to the particular line of work for which the normal school was established—the preparation of teachers for the common schools of the State.

During the year the Commissioner of Education called five sectional conferences of State normal-school teachers of home economics. These were held in Nashville, Tenn.; Kansas City, Mo.; Moorhead, Minn.; Chicago, Ill.; and Scranton, Pa.; and were attended by teachers from the near-by States. The attendance at these conferences of a group of teachers engaged in normal-school work made possible a discussion of their special problems that was of great value. These discussions centered about the following subjects:

1. The planning of courses two years in length to prepare special teachers of home economics for the common schools.

2. The planning of brief courses, ranging from 36 to 108 lessons in length, for the elementary and rural teachers, who may have to teach home economics in addition to their general school subjects.

3. A standardization of courses of home economics through a determination of the character of the courses that should be given in the grades, high schools, and normal schools, and of the credit that should be granted for such work.

4. A recognition by the normal schools of the home economics courses in other schools by providing special advanced classes for those who have pursued such courses in high-school or the grades, by demanding certain grade and high-school courses as prerequisites for entrance, or by allowing some credit for the courses already pursued.

5. A differentiation of the normal-school courses in home economics from grade-school courses, since the normal courses are planned for students of mature mind and a considerable experience of life who are studying with the distinct object in mind of preparing themselves to help others to make better homes and to live more efficient lives.

6. Means of effecting a close organization in the normal school of those teachers whose work may be correlated with home economics in order to avoid duplication of effort and to afford a wider perspective for the students that they may better appreciate the significance of education for the home and its relation to other subjects in the school curriculum.

7. Better-developed systems of practice teaching with a sufficient number of grade classes of average size in the training school and available rural schools in the vicinity that may be used as practice schools to give an adequate amount of practice to all.

8. A closer acquaintance with public-school home economics courses and class work, emphasis on careful and thorough instruction, a continued improvement in methods of conducting all class work in grades and high schools, guarding against the danger of making home economics a scholastic subject, and the treating of all processes and problems in their relation to home life, keeping them as nearly as possible in their proper setting.

9. The development of courses based on the needs of the woman in the home and planned to cover the entire field of the home maker's duties, rather than a limitation of the subject to the two industries of cooking and sewing, at the same time making sure that the students learn the essential things well and do not get a superficial knowledge of much that is nonessential.

10. An increased emphasis on the social and economic responsibilities of women.

11. The development of helpful relations with the community, since the interest and support of the community are absolutely essential to the success of the home economics courses.

12. Methods of keeping in touch with the graduates and observing the problems they meet and the effectiveness of their training as shown in their teaching.

13. The development of the true spirit of home making, which is as much the home economics teacher's task as the giving of instruction in the care of those material things that form so large a part of the housekeeper's concern.

In addition to these sectional conferences called by the Commissioner of Education, the New York State normal school teachers of home economics have met in conference during the year at the State College for Teachers in Albany. New phases of the teaching of the household arts and sciences and methods of improving the normal school courses in the State were considered. Thus the teaching of home economics in State normal schools, which began in Framingham, Mass., in 1898, has come to be recognized as a distinct field of instruction and its specific purpose and methods of training are more and more receiving the attention that their close relation to general education makes imperative.

HOME ECONOMICS IN PUBLIC SCHOOLS.

The present agitation concerning the reorganization of city schools has called attention to the lamentable weakness in the organization and administration of home economics departments in many of the larger towns and cities. In many of these school systems the high-school work is unsupervised, while a supervisor is in charge of the elementary classes. In others the supervision is divided between two persons, one of whom has all responsibility relating to food classes, the other authority over all phases of sewing. In order to discover what was the most desirable form of organization, a letter of inquiry was sent to 25 women who are experts in the subject of home economics. From the replies seven "home-economics letters" were prepared and mailed to city superintendents and teachers of home economics. Letter No. 4 consisted of the expressions of opinion relating to supervision of home economics in public-school systems. A typical reply was as follows:

The most effective organization for supervision is one supervisor for all home-economics teaching, with an adequate force of assistant supervisors, some of whom might be distinctly interested on the food side and others in the clothing subjects. There will be less wasted time through needless repetition, and hence more valuable lessons taught, if the home-economics work is planned by a broad-minded, well-trained person to proceed in an orderly sequence through the grades and high school. As in business, there will be less friction if one person is responsible for the management of all the work. In the elementary schools it is our experience that it is more efficient to have one person—except in the prevocational schools—teach both the food and clothing subjects. If there was a supervisor for each subject, unjust demands might be made upon the teacher, and there would be difficulties in assigning teachers and arranging classes.

Reports of the introduction or the enlargement of departments of home economics in the graded and high schools of many smaller cities and towns indicate a marked increase in the amount of such teaching. Some schools report the school lunch as the basis of the home-economics course, while in many high schools the isolated courses in sewing and cooking have been brought together and a home-economics course leading to a special diploma has been organized.

The William Penn High School in Philadelphia, the Washington Irving High School in New York City, and the Lucy Flower High School in Chicago offer typical courses in home economics for the technical high school.

The organization of the home economics work in the public schools of Kansas City, Mo., shows an interesting method of adapting the courses to the needs of the community in which the school is located. There are 55 elementary schools whose children receive instruction

in cooking, and 69 schools in which sewing is taught. Cooking begins in the fifth grade. Of the 55 schools, 6 have cafeteria lunch rooms in which the second-year cooking classes prepare all the food served in the lunch room. The children in these schools would have to carry lunches or prepare their own lunch at home were not lunches provided for them in the school cafeteria where they are under the careful supervision of the teachers. Six schools have a noonday lunch costing 10 or 15 cents a plate prepared and served by second-year cooking classes. This makes possible the preparation of recipes in family size and helps to fit the girls for the home duties that soon fall to them.

In the five elementary schools of Kansas City which are called prevocational schools, because they give one-fourth of each day instead of one-fourth of a day each week to some form of industrial work, the girls have three periods of sewing, one period of millinery, and one of cookery each week during their last two years in school.

There are six high schools in Kansas City in which domestic art is taught the first two years and domestic science the last two years. Three of these have large lunch rooms run by a manager appointed by the board of education, and three have small cafeteria lunch rooms run by the domestic science department, most of the food being cooked by the girls in the cookery classes. Two high schools have equipped housekeeping suits; one elementary school has a bedroom and bathroom and two elementary schools have a bedroom and family-sized kitchen.

A two-years' course in household arts was given last year in six academic high schools in Cleveland, Ohio, for the first time.

CAFETERIAS AND LUNCH ROOMS.

In many colleges and universities there has been a decided effort to establish courses for students not desirous of preparation for teaching, yet needing some equipment for income earning. The articulation of the home-economics department with the dormitory management and with college lunch rooms has done much toward giving the needed training. Certain schools have maintained a cafeteria entirely under the management of the home-economics department. These courses in lunch-room management have proved of value to the prospective teacher, since in many public schools the home-economics teacher is in charge of the school lunches. This latter condition exists at the State Normal School at Valley City, N. Dak., where the plan is as follows:

The food courses are self-supporting and recipes are prepared in quantity for family use; that is, to serve an average of from four to eight. The list of recipes to be prepared during the day is posted on the bulletin board in the

main hall; a small show case is provided at the entrance of the cooking laboratory, and as soon as a recipe is completed the dishes are arranged for sale. There is a constant demand for these products from teachers, students who are doing light housekeeping, and housekeepers in the town.

The students figure the cost of the recipes and become acquainted with the market value of the food materials before and after preparation. They are permitted small servings of all the dishes, so that they may know the flavor of all of them. The added interest that the preparation of a salable product creates is apparent in the spirit with which the students work. The home-economics department becomes also a recognized factor in the community through its relation to the housewife, and has an opportunity to keep in touch in a small measure with the needs of the home.¹

The summer school at Lake Chautauqua especially emphasized a course in lunch-room and cafeteria management. This course proved interesting to teachers anticipating the responsibilities of school lunch rooms.

In a description of the practical training in lunch-room management afforded by the Women's Educational and Industrial Union of Boston, Miss Ethel M. Johnson says:

The union offers to properly qualified students who are interested in the business side of domestic science opportunity for gaining practical experience in lunch-room and food-shop management while they are pursuing their college work.

The lunch rooms at the Union and New England Kitchen (a branch of the union plant) conduct a business amounting to more than \$250,000 yearly, and employ a force of over 100 paid workers. The school lunch department prepares and sends out daily luncheons for more than 5,000 high-school pupils in 17 different centers. The food shop carries on a business amounting to over \$100,000 yearly and has a force of 32 workers. Connected with the food shop is a catering department, a food laboratory, and a candy kitchen, each offering excellent opportunities for practical experience.¹

The home economics department of the Oregon Agricultural College conducted a dining room in the Oregon Building throughout the entire time of the Panama Pacific Exposition. The work was installed with the double purpose, first, as training to senior women in the conduct of a commercial venture, and, second, as a working exhibit of student work in the Oregon Agricultural College. Not all senior home-economics women could be given the training, but about 42 of the students each received six weeks of training. One result that was not anticipated, but was most welcome, was a profit which placed \$1,000 in a student loan fund for home-economic students and gave to the department at the college enough equipment to make possible the maintenance of a cafeteria on the campus and the furnishing in part of a residence for senior home-economics women.

The cafeteria at Simmons College, Boston, Mass., was planned and equipped for 200, yet serves an average of 515 students daily

¹ Journal of Home Economics.

with perfect orderliness and dispatch. From 12.30 to 1 o'clock it has been found possible to serve 10 students each minute. This has been accomplished largely by putting into the hands of the college seniors the regulation of the routing of the students, and of the hours when each group may be served. In the 20 school days of October, 1915, there were 10,280 meals served, averaging $16\frac{1}{4}$ cents each. The cafeteria, though under the direct supervision of the professor of home economics, is each year placed in charge of a student who has completed the course during the previous year. This plan makes it possible to give a year's excellent experience to some member of the class.

It is pointed out in the Cleveland Survey that at the West Technical High School a group of about 15 senior girls is specializing in lunch-room management, with a schedule providing 25 periods per week for lunch room and 15 for academic work. The daily program is planned in advance so that when they report each girl knows exactly what she has to do and whether she is to work alone or with others.

In the Polytechnic High School of San Francisco, the food classes are maintained without cost to the board of education, as all cooking is in family-sized portions and is sold either in the school lunch room or is combined into a teachers' lunch and served to a group of instructors.

TRADE COOKING.

In the Cleveland Survey, under "Household arts and school lunches", the statement is made that:

At the East Technical High School, Cleveland, Ohio, the work for senior and junior girls who specialize in foods and sanitation is trade cooking, and each year about 15 take it. They spend five periods a day in classroom work in addition to whatever catering they do outside. One of the most interesting and valuable features of the course is the accounting. Supplies for this work are not included in the regular food-supply budget for other classes. At stated times girls hand in their advance supply orders with estimated costs, and individual members take turns in going to market and keeping accounts.

HOT LUNCHES IN RURAL SCHOOLS.

No other State has done as much with the rural-school lunch as the State of Washington. From Garfield County, Wash., comes this report:

The majority of the schools here serve hot lunch in some form during the winter. The children enjoy it and do better work. The preparation of the lunch gives them ideas which in many cases are worked out at home.

The teacher in charge of the Model Rural School, Geneva, Wash., after deciding that the children needed a hot lunch every day, took

one of the cloak rooms and converted it into a kitchenette. The work is carefully arranged so as to be shared by all, and "a few minutes before noon we spend discussing the values of foods; what we will cook for to-morrow, its food value, and of what the lunch the children bring from home may consist in order to make a nearly perfect meal."

That the hot-lunch plan is invaluable as a method of practical instruction in domestic science in the country districts is testified to by many communities. Marengo, Iowa, reports as follows:

A new school law of Iowa states that domestic science must be taught after July 1, 1915. When school began last fall it was still a problem as to how it should be taught. Hot lunches were started, and by this means we are giving training in cookery. Directions are given and the girls are allowed to do the work alone. Once a week we have a lesson on food values and the theory of cooking.

The rural school near Eagle Grove, Iowa, serves a hot lunch every day from December 1 to March, and "once or twice a week has a lesson from a textbook and a talk on food values and food principles."

From near Osceola, Iowa, comes the report that the equipment was purchased from a fund gained by giving an entertainment and a pie supper, and that "the work was introduced not only to afford the children some hot food at noon, but to give them training in cookery."

A notable experiment in teaching homemaking in the typical rural school has been made in the Farm School, near Rock Hill, S. C. The cooking consists in preparing the midday lunch, in which all participate; more formal lessons in cookery are given for the larger girls only. In sewing, the school reports: "We make those things for which a real need is felt. Towels are hemmed, sewing and cooking aprons planned and made, and we have even attempted a dress for a baby."

Mrs. Josephine Preston, State superintendent of schools of Washington, points out the possibilities of the teacher's cottage in connection with this work:

If there is a teacher's cottage it may be used as a laboratory for domestic science. These cottages are equipped with the usual kitchen utensils, cook stoves, sinks or suitable washstands, and worktables. One of the teachers in our State who utilizes the district cottage for domestic science demonstration allows the pupils to prepare the noonday lunch of the school here. The farmers' families contribute milk and potatoes and other vegetables for this community plan of noonday hot lunches at the school. The idea of linking the teacher's cottage with domestic science is only passing from a remote possibility to a reality, but the rural schools in the future that give their most efficient training will feel that they have not been given their full opportunity until they have been given a teacher's cottage in which to teach the fundamental principles of home economics.¹

¹ Journal of Home Economics.

Several State educational institutions have published valuable bulletins concerning rural school lunches, among which are the following:

Oregon Agricultural College, "Hot Lunches for Rural Schools."

University of Nebraska, "Lunches for the Rural Schools."

Normal School of Washington, Cheney, "Hot Lunches in Rural Schools."

Kansas State Agricultural College, "Home Economics in Village and Rural Schools."

PRACTICE COTTAGES.

Interest in practice cottages continues to increase, and, with few exceptions, home economics teachers consider them the most desirable additions to department equipment.

The Journal of Home Economics reports as follows on the practice cottage at the University of Washington:

A small cottage which has been on the campus since the exposition of 1909 has come into possession of the home economics department.

The home economics decoration class worked out a color scheme. Textile students dyed unbleached muslin to screen the alcove. Students made braided rag rugs and dyed and wove others. They also wove pillow covers. Their only resource was a fund of \$50 from the treasury of the home economics club of the university.

The home economics department of Iowa State Agricultural College was given an old residence on the campus and \$5,000 to modernize the house and to furnish it complete.

The Michigan Agricultural College home economics department has been given the residence long used by the president of the college and will furnish and use it as a practice residence.

The senior class in home economics at the University of Minnesota was so large during the year 1915-16 that a second practice house was made necessary in order that all seniors should have the desired experience in a residence.

Two model apartments in Cleveland enable instruction to be given to 223 girls besides the usual classes in the formal laboratories.

That the home economics schools in the United States are not alone in their interest in practice houses is illustrated by the report of the "Girls' Hostel in Christ Church, New Zealand."²

The hostel is the practical training home of the girls attending the technical college. It is in charge of a principal and three student assistants, who are training as teachers of domestic science. The girls, after having a course in domestic science in the college, are sent to the hostel in groups, and they attend daily at the hostel for several weeks.

HOME ECONOMICS IN COLORED SCHOOLS.

Home economics occupies a prominent place in the education of the colored girl. Thoughtfully worked-out courses designed to give

²Blackmore, M. A., in Journal of Home Economics, December, 1915.

thorough technical training are to be found in the Methodist girls' homes, the Presbyterian girls' seminaries, and in Tuskegee and Hampton Institutes and their outgrowth. Courses of varying degrees of merit are to be found in practically all of the schools attended by girls. In a measure the work in most of the schools is handicapped by a lack of well-trained teachers acquainted with the conditions of the Negro homes and prepared to adapt the lessons to the real needs of the pupils.

In many of the Negro schools the home economics courses have failed to accomplish effective work through lack of cooperation with the boarding departments. In recognition of this weakness, special emphasis is now placed upon the maintenance of a close relation between the home economics department and the boarding department, where such a department exists within the school. The need of strong teachers, possessed of sufficient executive ability to carry on both types of work, is keenly felt.

Scotia Seminary, in Concord, N. C., offers an example of a home-economics department which is closely related to the life of the institution. The cooking teacher has the assignment of all work schedules and direct supervision of all the work in kitchens and dining rooms. The advanced classes prepare lunch to serve at the teachers' table. A carefully established laundry schedule is maintained, and all personal laundry is taken care of by the girls.

The excellent training in home economics presented through class and institutional practice at Hampton Institute has been supplemented by the use of a tea house, which provides a place where dainty service is possible and special orders can be prepared for sale. Classes in industrial dressmaking have recently been established. Similar classes are successfully maintained at Spelman Seminary, Tuskegee Institute, and other places. At Tuskegee Institute the preparation and sale of cooked dishes forms a large part of the technical training of the girls.

Practice cottages are used as residences for the girls in some of the Negro schools; for example, at Tuskegee Normal and Industrial Institute, at Atlanta University, and at Thayer Home. The girls are given entire charge of the housekeeping in these cottages, and thus acquire a sense of personal responsibility. They become acquainted with the problems of the individual home, and in so far as the work is carefully supervised, they learn the best method of carrying on household activities.

Probably no more interesting work in public colored schools has been developed than in Washington, D. C. Well-equipped laboratories, trained teachers, and careful supervision make possible a type of work that promises as great a development as the work

in the white schools. During the spring bread contests held between the pupils in the graded schools roused much interest throughout those sections of the city in which the schools are located. In the vocational schools the work in sewing and dressmaking is especially planned to give the girls training in renovating and remodeling garments.

In the public colored schools of San Antonio, Tex., the home economics courses have been particularly well adapted to the needs of the pupils. Special cooking classes are provided for those boys who expect to become cooks and waiters on dining cars, and many boys are placed each summer.

Since funds have been made available by the Smith-Lever Act, the United States Department of Agriculture has cooperated with the State colleges to further the formation of farm makers' clubs for rural Negro children, that the boys may become better farmers and the girls better home makers.

The Interstate Industrial Arts Association, a federation of organizations, has brought together the colored teachers of Washington and Baltimore who are "interested in the industrial, economic, and home development of the Negro and in means of furthering such development through the schools." Its aims are: (1) To round out the personality of the Negro through those phases of development that are dependent upon his industrial and economic growth, by a concerted effort directed from the school side; (2) to improve the conditions of living in the home and community and to effect a closer cooperation between the school and the home. This association hopes to become the nucleus about which the colored teachers of other States will organize. At the annual meeting in April, held in Washington, D. C., a large portion of the program was devoted to home-economics problems.

HOME-ECONOMICS ASSOCIATIONS.

At no time has home economics occupied so prominent a place on the programs of the various educational associations as during the the past year. The wide range of affiliations bespeaks the varied types of work that have developed and the lines of activity in which home-economics courses awaken an interest. In addition to the annual five days' meeting of the American Home Economics Association, programs were held during the annual sessions of the National Education Association. By an unusual arrangement of dates the American Home Economics Association held two annual meetings within twelve months—one in Seattle, Wash., August, 1915; the second in Ithaca, N. Y., in June, 1916. Home-economics subjects were also presented on the programs of the following organizations:

The National Society for the Promotion of Industrial Education, St. Paul, Minn.

American Chemical Society, Urbana, Ill.

Pan American Scientific Congress, Washington, D. C.

The Biennial Meeting of the National Federation of Women's Clubs, New York City.

Central Association of Science and Mathematics Teachers, Chicago, Ill.

Southern Conference for Education and Industry, New Orleans, La.

Eastern Arts Association, Springfield, Mass.

Western Drawing and Manual Training Association, Grand Rapids, Mich.

Many States have held special home economics conferences independent of or in conjunction with State educational associations. The home economics teachers in most large cities have begun to form associations. In some cases the city associations have allied themselves with the housewives' leagues, and through them are assuming active responsibilities outside of the schoolroom. State organizations have been working on unified State courses of study or other pertinent problems. Local associations are also making a study of special problems.

EXTENSION TEACHING.

Undoubtedly the extension teaching of home economics as fostered and promoted by the Smith-Lever Act is one of the most significant educational movements of the time.

The little girl of the ungraded school and the mother in the rural home are alike interested in subjects related to homemaking. At the present time the demand in the extension service for well-trained women with the qualities of agreeable personality, tact, and practical experience, and accurate scientific knowledge which will enable them to reach all types of women, far exceeds the supply. To find capable women, and to give them the exact information which must be at their command, is the peculiar province of the agricultural and mechanical colleges in the North and West. In the South this same type of teaching has been undertaken by the State colleges for women as well as by the agricultural and mechanical colleges.

Winthrop College, at Rock Hill, S. C., held a month's school in January for the women county agents. The extension department paid the agents their regular monthly salary during their time of attendance and the agents paid their own local expenses. Since many of these women are graduates of Winthrop College, and have had courses in home economics, the arrangement was most successful.

Similar courses of instruction have been established at the Women's College of Florida, at Tallahassee; at the women's Normal and Industrial Colleges in North Carolina, Kentucky, Alabama, Tennessee, and other Southern States.

The organization of extension teaching is somewhat different in other sections of the country, but the need of careful instruction for the extension workers is equally great.

To discover good extension material among the more mature students, to develop in them the ability to present in agreeable form the knowledge that is theirs, to detail them to some form of rural service that will thoroughly acquaint them with rural conditions, is a task that must be assumed by the home economics departments of the State colleges.

The function of the county agent has been described as follows:

A county agent is one who demonstrates, both practically and scientifically, subjects which pertain to home and community betterment. She may give these demonstrations to groups or clubs, or she may demonstrate to the individual farm woman or girl in the home. Before she can do the latter she must gain the confidence of the housewife. Often some simple service rendered the housewife at the psychological moment in a quiet, unobtrusive manner opens up the pathway to her heart. She resents the teacher, but she soon learns to welcome the cooperator and helper. Once the county agent has proved her ability in these capacities she becomes a source of inspiration, then a counselor, and, as her field of activities leads her from the home into the community, she becomes a leader among the women of her county.

The problems confronting the county agent are as broad and as comprehensive as the family, the home, and the community. To meet these problems successfully she must possess a personality which disarms criticism and arouses enthusiasm, a power to sense situations quickly and an adaptability which enables her to render the most humble service with a willingness that wins admiration.¹

In an effort to assist the rural teacher, who by the law of Iowa must teach some phase of home economics throughout the year, the Iowa State College at Ames has arranged a correspondence course, which is announced as follows:

This is a course of 80 simple lessons so arranged that they can be easily applied in the schoolroom. No elaborate equipment will be necessary to carry out the work in the school, and only the practical phases of home work are included. The course begins with a few lessons on the principles of sanitation; then takes up briefly personal hygiene, and home management, and more fully, cooking and sewing. The subjects are treated so that a lesson prepared in the course is adaptable to the schoolroom with but little additional labor.

Enrollments may be made at any time. The lessons will be sent in the form of circulars containing an assignment of five lessons each. The fee is \$2.

One definite form of home economics education, i. e., the printed article relating to the management of home affairs, has been given more attention during the past year than ever before, and many home-economics teachers have come to realize that teaching through the printed page is of great importance. A committee of 50 for journalism in the field of home economics presented a program at

¹ Journal of Home Economics, July, 1916.

the American Home Economics Association at the annual meeting held in Ithaca, N. Y. It proved to be one of the most interesting and important sessions of that association meeting.

CONCLUSIONS.

There is noticeable growth both in extent and in quality of instruction in home economics in universities, colleges, normal schools, and in public-school systems.

There is a marked effort to relate school instruction in home economics to home life and home conditions. In public schools this effort is observed in changed methods of lesson presentation and in the extended use of practice cottages.

In colleges and universities there is a manifest desire to strengthen teacher-training courses, that the graduates may more easily meet the needs of the pupils and be enabled to adjust themselves more quickly to local school needs.

The rapid growth of extension teaching has made new demands upon colleges and universities for the installation of courses with special adaptation to the needs of those anticipating this type of employment.

The recent school surveys have recognized home economics as an important portion of public-school education, and have given unusual prominence to discussions relating to this line of work.

The desire among teachers for a better professional spirit has been manifested by their interest in numerous conferences and their attendance at local, State, and National home-economics association meetings.

CHAPTER XVII.

EDUCATION IN THE HOME.

By MRS. FREDERIC SCHOFF, *Director*, and ELLEN C. LOMBARD, *Secretary*, *Home Education Division, Bureau of Education.*

Schools may be measured for efficiency from the outside, as in recent school surveys; but the home must necessarily be judged from the inside. Coincident with the attempt of schools to fit themselves into their environment and to contribute more and more to the development of the children is the attempt of those interested in the home to find some working basis for awakening home makers to a consciousness of the needs and responsibilities of the home and of the community and an effective plan of home education. Organizations of parents, women's organizations, health boards, periodicals, and other agencies have done much to bring about a new sense of responsibility in home making and an intelligent desire to meet the obligation. During the past year, particularly, there has been an effort throughout the country to see that parents are informed regarding the physical care of children, especially young babies, and to improve hygienic conditions generally.

Some effort has also been made toward intellectual development in the home. It is realized more and more that this important phase of home life should not be neglected, since without it the home is a barren place and gives meager opportunity for the development of the whole nature of the individual, the unfolding of the mind, and the development of will power, which are so important at the beginning of life in the upbuilding of character. Increasing activities have been noted in social settlement and neighborhood houses through the establishment of homes for workers that are intended to be model homes.

Significant signs of progress are noted in the effort to coordinate the work of all existing agencies, social, economic, religious, educational, and philanthropic, with local, State, and educational agencies, in solving the problems of home life, the determining forces in the character of national life.

SCHOOL AND HOME IN RECENT SURVEYS.

The school is realizing as never before its dependence upon home life and its relation thereto, as well as its relation to the community.

Dr. Charles Hubbard Judd, in the Cleveland survey volume on "Measuring the Work of the Public Schools," says in regard to causes of failure of children in school:

We find that there are children whose home environment is bad. These unfortunate children can not find opportunity or encouragement to study. * * * The community can not afford to let a child grow discouraged, because the discouraged child becomes an unproductive citizen. * * * The failure of a child in school because of adverse home surroundings is a large problem in which the community should be more interested than any individual.

On the rural side the problem is well stated in the survey of three counties in Alabama made by the State department of education. In summing up the causes of failure in school children under totally different conditions, the report points out that the influences of the home are back of the discrepancies of school life. "A nation of tenants will never be a nation of home builders. Farm tenancy has a decided and detrimental influence on school conditions."

In analyzing the factors of vocational efficiency for the San Antonio survey, Prof. J. F. Bobbitt asserts that the fundamental aspect of the training of children takes place "in the home, in the street, in play activities, observations, and taking part in the human activities in the community." He points out to teachers the need of social contact with families in order that they may know the lives and home conditions of the children as fully as they know books and educational methods.

The recent "Study" of the Dansville High School, by J. Murray Foster, contains a special section on "The Parents." Mr. Foster describes four means used to awaken the interest of parents in the school: (1) Publicity through the press; (2) handbooks printed and distributed by the board of education; (3) reports and notices sent to the parents; and (4) meetings of the parents held in the school-house. The handbook proved helpful, but most interest was aroused through the parents' meetings.

Changed home conditions are also used by Dr. Alfred Hall-Quest in his recent investigation of home studying¹ as the basis for a demand that supervised study at school take the place of assigned study at home. Dr. Hall-Quest analyzes the factors of modern home life, especially in cities, summing up as follows:

The instinct of self-preservation with its expression of the individual's independence has found unlimited stimulus in American democracy. Once the child remained consciously and quite willingly dependent upon the parents for a

¹ Supervised study, Macmillan, 1916.

number of years. Beyond the home there were only a few occasional attractions indulged in, and these did not materially disturb family unity or stability. But to-day the boy seven or eight years old begins to earn "spending money" by selling papers, running errands, or doing odd jobs. Parents pay their children a few pennies a day for doing household work. The child is early taught—and rightly so—to be economically independent. By the exercise of this independence the child becomes skilled and even versatile. His plasticity, curiosity, and energy make possible a wide range of information and ability, beyond that of the parents in many instances. The older children are even more independent. They usually pay for their board and room at home. They exercise their own judgment in selection of wearing apparel. They make acquaintances outside of the circle of friends frequented by the parents. Resulting from this economic independence is a decrease in respect for parental authority. The children may even feel superior to their parents.

The industrial unity of the early family required that every child contribute to the general store of supplies. Practically everything needful was made at home. Candles, clothing, furniture, food—all necessities were made by the family. There was constant exchange of service. The division of labor was individual and familial. The small family group was quite sufficient unto itself. To-day, however, industry is widely differentiated. Few things are made at home. Many families rent apartments and board. There is little or no visible evidence of interdependence. Each member of the family feels that he owes nothing to the others and that they owe nothing to him—beyond monetary assistance—and this is an elastic band.

The school child in these independent family groups soon finds that there is little time, little inclination, and less ability to serve him along intellectual lines. Ideals and interests have become so individualized that only with difficulty can any member of the family render competent service to the child attending school. Moreover, providing the child with a suggestive and hygienic study environment is unthought of or at best not understood. The child must attend the school—so the law demands, and what a relief to the mother!—but beyond the common necessities little is contributed in many homes toward the success of the child's career.

THE VISITING TEACHER MOVEMENT.¹

One of the most vital factors in drawing the home and the school more closely together is the employment of the "visiting teacher," as instituted in several large cities. Boards of education and philanthropic educational organizations have recognized the value of visiting teachers to the efficiency of the schools, and this movement has shown marked development during the past year.

The need of cooperation of parents has long been felt by the teachers. In the village and open country, teachers have had better opportunity to reach the homes, and some teachers of a progressive type have managed to enter into the community life of the school district and in various ways become acquainted with the home life of the children.

¹ For an interesting statement of this new field see: *The Visiting Teacher in New York City: A statement of the Function and an Analysis of the Work of the Visiting Teacher Staff of the Public Education Association from 1912 to 1915, inclusive*, by Harriet M. Johnson, June, 1916.

Similarly kindergartners have kept in close touch with the parents and home conditions and have found home visiting an important factor in solving the problems of the individual child. One report received by the bureau shows a record of several thousand visits made by two kindergartners during the past year.

While grade and high school teachers have done much home visiting and tried to meet the many demands outside of the school, it has been impossible to meet all of the demands of a large school district in the limited time remaining after school hours. Hence the visiting teacher. She has come into existence to supplement the work of the class teacher, especially in cases of retarded and failing pupils. Sympathetic understanding and cooperation with the class-room teacher and actual knowledge of teaching methods, as well as familiarity with all the forces at work in the community, detrimental to the progress of the children and knowledge of all the social agencies existing in the community which might be called into cooperation not only in their city but outside institutions that might be of service, are necessary if the work is to be effective. The visiting teacher must be well versed in the traditions and prejudices of the foreign countries from which the parents may have come, and must have had actual experience both in teaching and in social service. The visiting teacher is the mutual friend who brings the parent and teacher together and serves not only the school, but the home through her sympathetic contact, so that home and school work together to benefit the children.

PROGRESS OF THE MOVEMENT.

In California a State law was passed to the effect that "Boards of school trustees or city boards of education of any school district, may employ teachers to be known as home teachers, not exceeding one such home teacher for every 500 units of average daily attendance in the common school of said district as shown by the report of the county superintendent for the next preceding school year." The duties of the home teacher are divided between the two domains of home and school.

The following are other items of progress reported from various localities during the year:

New York, N. Y.—Visiting teachers have received official recognition in New York City. Six visiting teachers have been employed by the board of education, and 7,721 homes visited at least once during one year. More than 53 agencies have been named as cooperating with the visiting teachers, but this does not represent the large number actually cooperating in this work.

Boston, Mass.—Visiting teachers or school visitors have won unofficial recognition in Boston. Twenty visitors are at work in connection with one high school and the grammar schools from which the children come to this high school. Seventeen social agencies cooperate with the school visitors. Eight hundred homes were visited and upward of 1,200 calls made.

Rochester, N. Y.—A visiting teacher is maintained in the public-school system and there are eight visiting nurses under the board of health. All city agencies are in close cooperation. Students in the normal school are made acquainted with agencies that can be called on for the welfare of the child.

Montclair, N. J.—The home department in connection with the public schools and supported by the General Federation of Women's Clubs has a visiting teacher whose work it is to go into the homes of foreigners and help them to higher standards of living.

Gary, Ind.—The district plan has worked favorably here. The district teacher or register teacher is the point of contact between the home and the school. She visits the home of each child at least once a year and keeps the same district as long as she is in the school.

Columbus, Ohio.—The visiting teacher is employed by the Parent-Teacher Association. In 10 months on half-time work the visiting teacher made 513 visits; 156 cases were handled, 12 of which were referred to the truant officer, 15 to the nurse, and 17 to other agencies.

Baltimore, Md.—A nurse who is also a social worker is paid by private subscriptions. Perceptible improvement in daily attendance of school children has resulted.

Springfield, Mass.—The visiting teacher gathers the school history, the story the home gives of the child's development, and the knowledge of the child's environment, and habits outside of school. * * * She cooperates with existing agencies for social welfare. Work here has been done in cooperation with the psychological laboratory.

Newton, Mass.—A school and home teacher is employed under the board of education. Some time is given to teaching.

Lincoln, Nebr.—Room teachers, about 50 in number, are assigned groups of pupils of not more than 30. These teachers become visiting teachers and are responsible for visits to the homes of the pupils.

FIRST CONFERENCE OF VISITING TEACHERS.

Much interesting and valuable data were brought together at the section devoted to "The Visiting Teacher" and "The Problems of Retardation and Delinquency" at the meeting of the National Education Association at New York City in July. The visiting-teacher idea was developed as well as the attendance-officer idea. Dr. Katherine B. Davis said, in regard to the effectiveness of the visiting teacher:

The work of the visiting teacher is one of the most important things that can be done in a large city where the teachers in the grades have such large classes to deal with. It is a way of tying the family, the school, and the teacher together.

Howard W. Nudd, in giving his address of welcome, said:

The visiting-teacher work * * * seeks to be preventive, by getting in touch with the difficulty early, before it has had a chance to grow acute and, by removing the causes, minimize the growth of maladjustment and thus make unnecessary the more drastic and sometimes ineffectual corrective treatment later on.

In speaking of the importance of this work to the community, Miss Elizabeth P. Durham asserted that the visiting teacher per-

forms a function which can not be well performed by any other group in the community. She said:

Representing the school, she has the *entrée* which thousands of families absolutely deny to other social workers. * * * In addition to helping the teacher to do a more effective job within the school, she recreates bad home life without the school and makes available for the use of the school the many social organizations existing for family and individual service.

Miss Jane McCrady, head worker of the Ellis Memorial and El-dredge House, Boston, Mass., advocated giving to future teachers, as a part of their normal school preparation, an intelligent training in social service. Miss Elizabeth Roemer gave an account of the work of visiting teachers in Gary, Ind., where each classroom teacher is given charge of a certain district in order to bring her in touch with the home life of her pupils.

Miss Harriet M. Johnson summed up the function of the visiting teacher as follows:

To recognize, to study, and to respect the individuality of the child; to this end to establish informal relationships with him; and to adapt conditions of the home, school, and society to his needs.

FEDERAL AID IN HOME EDUCATION.

Nearly all departments of the Federal Government have contributed something toward the betterment of the home during the past year. The Department of Labor issued a bulletin on "Baby-Week Campaigns," which deals with the organizations of such campaigns, programs, baby-welfare information, etc. A section of the Department of Agriculture yearbook contained an article by Helen W. Atwater on "Selection of Household Equipment," which is helpful to home makers. It deals with planning for buying; choosing for necessity, convenience, and pleasure; fitting equipment; what makes a well-furnished house; economy in cost and care; general and permanent equipment, etc.

The Bureau of Indian Affairs is making efforts to better the Indian homes. Commissioner Sells says: "Approximately three-fifths of the Indian infants die before the age of 5 years. * * * One Indian baby out of every three dies before it is 3 years old because it does not have the right kind of care." The Department of the Interior has just issued a bulletin called "Indian Babies" to meet this need.

The Commissioner of Education has said that "the home, the primitive and primary institution for the education of children, is still the most important agency for education for life—mental, moral, physical, industrial, economic, social, and civic. The school is only supplementary. Any agency, therefore, that would promote right education most effectively must find some means of cooperating with

the home and of helping parents, who are the most constant—and should be the most effective—teachers of their children.”

The Federal Government gave recognition to the importance of home education in the establishment of the Home Education Division in the Bureau of Education, with the cooperation of the National Congress of Mothers and Parent-Teacher Associations, in this way assuming the consideration of education from birth to maturity, for 12 months in the year instead of 10, for 24 hours in the day instead of 5 hours.

It is the purpose of the Bureau of Education to stimulate intellectual life in the home, to assist in the training of the children before they are of school age, to help boys and girls to further their education after they have left school, and to bring about a closer cooperation of home and school.

The actual cooperation of over 150,000 women has made it possible to reach upwards of 240,000 homes with information on the care and training of the baby and other reading matter relating to home making. During the past year at least 20,000 mothers of young children have received the pamphlet on the “Care of the Baby.”

To bring about a closer cooperation of home and school, hundreds of pamphlets on “How to Organize a Parent-Teacher Association” have been distributed.

NATIONAL READING CIRCLE.

The National Reading Circle of the Bureau of Education came into existence because of the demand of boys and girls, men and women, to read under direction in the home. A committee of professors of literature in some of the universities was formed to select the books in some of the courses. This committee was composed of Prof. William Lyon Phelps, of Yale University; Prof. C. Alphonso Smith, of the University of Virginia; Prof. Richard Burton, of the University of Minnesota; and Prof. Charles Forster Smith, of the University of Wisconsin.

The courses that have been distributed are:

Course 1: The World's Great Literary Bibles: The Iliad, The Odyssey, The Divine Comedy of Dante, Goethe's Faust, and three plays of Shakespeare.

Course 2: Great Literature: All the books of Course 1, The Aeneid, The Nibelungenlied, Don Quixote, Plays of Moliere, Paradise Lost, Prometheus Bound, Deuteronomy, Isaiah, Job.

Course 3: Parents' Reading Course: Practical Motherhood, For Girls and Mothers of Girls, Marriage and the Sex Problem, The Development of the Child, Studies in Child Development, The Care of the Baby, Childhood, Training of the Human Plant, A Study of Child Nature, Children's Rights, A Montessori Mother, Misunderstood Children, Beckonings from Little Hands, Training of the Girl, Training of the Boy, Ethics for Children, Love and Law in Child

Training, Dawn of Character, Elements of the Theory and Practice of Cookery, Domestic Economy, Shelter and Clothing, Mother, The House of Happiness, Polly Anna—"The Glad Book," Bobbie, General Manager, Rebecca of Sunnybrook Farm. Suggested reading: Parents and their Problems, Library of Home Economics, Parents' Duty Concerning Sex, The Care of the Baby, The Student's Froebel (The Education of Man), Boston Cooking-School Cook Book, Canning Vegetables in the Home, Canning Tomatoes at Home and in Club Work, Canned Fruit, Preserves, and Jellies (Household Methods of Preparation), Boys' and Girls' Agricultural Clubs, Baby-saving Campaigns, Birth Registration, Prenatal Care.

Course 4: Miscellaneous Course for Boys: Hans Brinker, The Jungle Book, Robinson Crusoe, The Last of the Mohicans, Tom Sawyer, Stover at Yale, Lorna Doone, Treasure Island, The Cloister and the Hearth, David Copperfield, Westward Ho!, Age of Chivalry, Ivanhoe, Idylls of the King, Macbeth, Merchant of Venice, The Oregon Trail, Franklin's Autobiography, Abraham Lincoln, Robert E. Lee, Burke's Conciliation, Webster's First Bunker Hill Oration, Washington's Farewell Address, Lincoln's Gettysburg Address, Lives of Poor Boys Who Became Famous, Famous Scouts, Including Trappers, Pioneers, and Soldiers of the Frontier, Careers of Dangers and Daring, What Can Literature Do for Me? Suggested Reading for Boys: the Children's Hour.

Course 5: Miscellaneous Course for Girls: Alice in Wonderland, Birds' Christmas Carol, Little Women, Pride and Prejudice, The Jungle Book, David Copperfield, Lorna Doone, Mill on the Floss, Ivanhoe, Evangeline, Idylls of the King, Merchant of Venice, Romeo and Juliet, Florence Nightingale, The Story of my Life (Helen Keller), A Short History of the English People, Some Silent Teachers, Shelter and Clothing, Foods and Household Management, The Furnishings of a Modest House, Girl and Woman, What Can Literature Do for Me?

Course 6: Thirty Books of Great Fiction: Adam Bede, Arabian Nights, A Modern Instance, Clarissa Harlowe, David Copperfield, Guy Mannering, History of Henry Esmond, Ivanhoe, Joseph Vance, Kidnapped, Lorna Doone, Luck of Roaring Camp, Ordeal of Richard Feverel, Pilgrim's Progress, Pride and Prejudice, Robinson Crusoe, Romola, Tale of Two Cities, The Cloister and the Hearth, Vanity Fair, Vicar of Wakefield, Last of the Mohicans, Scarlet Letter, The Pilot, Les Misérables, The Three Musketeers, Père Goriot, Anna Karenina, With Fire and Sword, Treasure Island.

Course 8: American Literature: The American, Autocrat of the Breakfast Table, Ben Hur, Bigelow Papers, Essays, Representative Men, Democracy, The Federalist, Four Million, Goldbug, The Grandissimes, Huckleberry Finn, Tom Sawyer, Last of the Mohicans, Man Without a Country, Marble Faun, Scarlet Letter, A Modern Instance, Montcalm and Wolfe, My Summer in a Garden, Reign of Law, The Sketch Book, Two Years Before the Mast, Walden.

School superintendents, principals, and teachers, as well as librarians and the press throughout the country, have created interest in home reading. State libraries and library commissions have placed the books recommended in these courses at the disposal of the readers in their respective States.

In California a reading club of about fifty mothers has been formed which meets weekly. With a chosen leader these mothers discuss parts of books which have been assigned for them to read during the preceding week. They write summaries of the books when they

complete them. Many other reading clubs have been formed and are doing creditable work in various parts of the country.

About five thousand readers are now enrolled in the National Reading Circle, but this does not represent the large number of persons known to be actually reading the books selected.

HOME EDUCATION THROUGH EXTENSION COURSES.

Among the new developments in home education during the year is the announcement by the Massachusetts State department of education of correspondence study courses for residents of the State. This will give men and women an opportunity to study at home in their special field of endeavor. Sixty-six courses have been offered covering a wide range of subjects. University extension courses in reading and study have been in operation in Wisconsin, Pennsylvania, Iowa, Chicago, and elsewhere.

PARENT-TEACHER ASSOCIATIONS.

The Parent-Teacher Association movement has grown steadily during the past year. Recognizing their own need, parents have made united and earnest efforts in various parts of the country to better their conditions by coming together to talk over their problems. They have joined with the teacher in discussing their problems. Every State has joined the nation-wide movement in the interest of the home and the school to a greater or less extent. Thirty-four State conferences of parents and teachers on home education and child welfare were held during the past year.

Three national conferences on home education were held during the year—one at the meeting of the Department of Superintendence of the National Education Association at Detroit, one in connection with the meeting of the National Education Association in New York, and one in Nashville, Tenn. Thousands of district and local conferences were held throughout the country. The welfare of the child and home education were the chief topics of discussion at these meetings. At the New York meeting, the cooperation of mothers and kindergartners was under discussion.

Miss Elizabeth Harrison, of Chicago, in her address on "Mothers without kindergartens," said:

There are many thousands of young mothers in our land who long to give the advantages of the kindergarten training to their children, but who are powerless to accomplish this because of the apathy, the ignorance, or the poverty of the community in which they live.

But the children of these many earnest mothers need not be entirely without the development of mind and body which the kindergarten brings. There is much which such mothers, alone and unaided, may do along kindergarten lines if they will give as much time and effort to this important thought of awaken-

ing and nourishing aright the best instincts of their children as they are now giving to less vitally important subjects.

The thoughtful young mother realizes that there is a vast difference between a strong, well "young animal" and her child's possession of a well-controlled, serviceable body which obeys the slightest command of the spirit within.

The kindergartner understands this and gives to her children experiences in the coordination of their muscles by letting them walk on a raised board, or a chalk line on the floor, by encouraging their running or skipping or hopping in time to loud or soft music, sometimes fast and sometimes slow. The isolated mother may not be a musician or she may not have time to play on the piano for her children's lively dancing, but she can sing as she works and they can run or skip or dance in time to her song. I once heard Miss Frances Willard state that she learned to dance by keeping time to a hymn which her mother would sing, over and over again, for her and her little sister to dance by. Learning to go up and down stairs alone, to climb fences, to swing on branches of trees are all helpful means of giving the child confidence in the use of his body.

Again the kindergartner knows how much added zest the imagination gives to all such exercise and the breadth of sympathy which it adds throughout all life, so she soon leads her children to dramatize the world about them. They learn to play that they are flying birds, or fluttering butterflies, or running brooks, or growing trees, or the rushing and whirling wind, as well as to play that they are mammas and papas, grocerymen and messenger boys, or other human agencies. For she, the kindergartner, has learned that the child's simple reenacting of the activities which surround him is helpful to him not only in exercising his body more vigorously but also in awakening his interest in nature and in the right kind of human activities. May not a mother in the midst of her many cares still find time while she performs her necessary work to play thus with her child? A few words on her part will start the little one along a whole line of dramatic representation which will be as good for the soul as it is for the body.

Again, the kindergartner knows the influence of stories upon the life of the child—how they help to lift him out of his own narrow little world into an almost limitless world of ideals and possibilities. Surely the young mother who cares enough for her child to desire to awaken right ideas in his mind can soon train herself into a story-teller! It will give to her an added charm in the eyes of her children which will last far into their growing boyhood and girlhood. Wisely selected stories, well told, bring an impetus as can no other means toward the real culture which comes from a love of literature and of history.

The kindergartner encourages the child to express his ideas by using chalk, crayon, pencil, or, when skilled enough, with water-color paints. The mother need not be an artist to start these lines of interest in her child. His own eager little self will gladly seize the opportunity for self-expression through these easy means of representations. Again and again I have known mothers to be astonished at the unsuspected ability of their children to express themselves in this way when given the free use of a small blackboard and chalk.

Last, but not least, the kindergartner realizes the social value of the child's commingling with other children near his own stage of growth or development and consequently divides her children into groups of helpers and helped, thus teaching them to bear and forbear, to respect the rights of others, and to enrich their own small lives with the ideas and experiences of other small lives that lie nearer their comprehension than do the ideas and expressions of grown-

up people. The only way in which the isolated mother can compensate for the lack of this great influence in her child's life is by becoming as a little child herself and striving to understand the child's point of view. If she does this her reward will be rich and wonderful, for it will bring to her a glimpse of her child's inner world of which without this comradeship she will know nothing.

Miss Lucy Wheelock, of the Kindergarten Training School, Boston, Mass., spoke on the "Need of Preparedness for Service." She referred particularly to preparedness for the girls. She said:

Every woman, be she mother, sister, or aunt, needs to know how to "live with children" in the spirit of Froebel's motto. Hence she should have a liberal course in child study, including child hygiene, child psychology, child literature, games and plays, and occupations. The laws of life and growth should be unfolded to her through a study of biology, and the storybook of nature, "the dear old nurse," becomes her daily text. "The person with a story" is the best friend of children, and no teacher or mother should be without a story. To give the story means knowledge of literature—an acquaintance with the myth, the legend, the folk tale and fairy tale. A song and a lullaby take equal rank with a story as part of a woman's life equipment. Asylum children and tenement-house children miss many of the goods of fortune. Their greatest lack is the "mothering" which finds expression in the cradle song, in the songs without words, which the mother heart devises for the awakening of the child's soul.

In *Daddy-Long-Legs* and in *The Dear Enemy*, Jean Webster has pictured the difference between *The Home* and a home.

The story, song, and play are necessary to the atmosphere of a home. No one study of any college curriculum or of any finishing school can be compared to the intimate study of child life as suggested by Froebel's "Mother-Play" with its accompanying store of songs and plays.

Instinct is usually wise and leads to a desirable goal. In motherhood of human beings it must be supplemented by insight and training.

Play is instinctive, and children with half a chance will get the benefit of nature's tuition. But with the artificial and crowded conditions of city life, play can not be free and natural. Play spaces are lacking and incentives as well.

Organization and guidance are needed for the play instinct, as for any other, that it may reach its full fruition.

To be a friend of children is to be a playmate. For this reason our girls should know how to play. They should have a repertoire of plays and games—and best of all, the spirit of play. It is this spirit of play which keeps the zest and freshness of life. It is the root of art and the sweetener of tasks.

And, finally, every woman needs to know her neighbors and her relations to them. We may call this study of the neighborhood, sociology or social welfare, or any other name. The main thing is to secure the feeling of responsibility which makes each human being his brother's keeper, or her sister's keeper. The American home training is charged with a serious lack—a lack of the sense of responsibility for the rights and welfare of others. No lack could be more deplorable. The family tie, which binds together parents and children, brothers and sisters, is the first to strengthen. Next the bond which holds together communities with common interests and common claims for weal or woe.

Beyond the community is the State with its call for loyal service, and last that "great society" of world citizenship. Loyalty to the family, to the State, to the great human family wherever gathered—this the aim of our course in social service.

Mothers, you are the home makers! You are the true "keepers of the city"! Your daughters, too, are to be home makers. Give them the training that they may live better the lives you meant to live.

ACTIVITIES OF PARENT-TEACHER ASSOCIATIONS.

Among the activities of parent-teacher associations that seem to be typical are:

San Diego, Cal.—Conducting baby health centers.

Mitchell, S. Dak.—Promotion of physical inspection of school children.

San Antonio, Tex.—Established a dental clinic.

New Jersey.—A traveling baby health exhibit made available by parcel post. Pamphlets on the care of the baby in Italian, German, Hungarian, Yiddish, and English.

Providence, R. I.—Prenatal clinic in hospital.

Nashville, Tenn.—The children's clinic reports 1,031 treatments.

Portland, Oreg.—The parents' educational bureau has examined 2,000 babies and helped 1,500 parents.

Denver, Colo.—Three thousand children registered for home gardens. Provided lunch rooms in high-schools.

Oakland, Cal.—Established school cafeteria in Washington school and made it self-supporting. Supplies for school luncheon provided by parent-teacher association and pupils prepare the food under direction of their teacher in a one-room schoolhouse.

Twombly, Colo.—Organization of 300 girls in seventh and eighth grades for education in home making.

Montgomery, Ala.—Provided kitchen utensils and dishes for the domestic department of one of the schools. Conducted an antigrippe campaign.

Texas.—Over 50 parent-teacher associations include in their programs the value of the kindergarten, home and school gardening, and playgrounds.

Chatham, N. J.—Helped organize girls' home culture clubs with 75 members.

Some other types of work reported by parent-teacher associations are: Providing heating and ventilating plants; providing shower baths for boys; giving talking machines; installing an electric clock; purchasing pictures and pianos for schools; furnishing schoolrooms; equipping playgrounds; providing motion-picture machines; establishing social centers; cooperative investigation to correct curriculum; sewing classes to teach girls to make their own clothes; rest rooms; providing milk for children not properly nourished; drinking fountains to replace open pails in schoolhouses; placing warning signs to motorists at approaches to schools; establishing State loan funds for education of boys; lessons to school children on table manners; organizing mothers' study clubs; furnishing layettes to expectant mothers; child-welfare exhibit; helping to have streets graded and paved from school buildings to business districts; physical-culture classes for mothers; building and equipping kindergartens; establishing room for anemic children under conditions of correct feeding; all night summer camp for mothers and babies in a park;

securing medical inspection; flagpoles for school yards; clean-up weeks.

In Oregon a local junior exposition was held to show parents the great variety of children's interests and the ways in which they can direct those interests into constructive work by furnishing materials and tools.

MISCELLANEOUS ITEMS IN HOME EDUCATION.

Negro mothers organize.—The effort of Negro mothers to learn more about home making and child training has resulted in a national organization which now has membership in 17 States.

Second annual home education tour.—The second joint tour of the United States Bureau of Education and the National Congress of Mothers and Parent-Teacher Associations took place in March, 1916. Forty-two meetings were held. The topics of discussion were: Cooperation of parents and teachers; the responsibility of the home and how to meet it; measures for saving babies; and continuation education for boys and girls and men and women in the home. Many of the meetings were held in rural districts. The States visited were Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, and Tennessee.

School for mothers in Detroit.—The recent bequest of a million dollars by Mrs. Thomas Palmer, of Detroit, for the establishment of a school for education in home making and child nurture is another effort to place the home on a higher, more intelligent basis. The tuition of this school is to be free to those who are unable to pay tuition.

Baby-week campaigns.—Many baby-saving campaigns have been carried on during the past few years, but the "Baby-week campaign" in March planned by the General Federation of Women's Clubs in cooperation with the Children's Bureau of the United State Department of Labor was Nation-wide and called for the cooperation of every National, State, and local organization. State, county, and city boards of health, as well as school, philanthropic and religious agencies, worked for the success of the campaign. It was a united effort to reduce the loss of infant life throughout the country by placing educational material in the hands of parents through lectures, moving pictures, clinics, etc.

For immigrant mothers.—Five classes of immigrant mothers have been conducted, with 25 in each class, in Chicago, Ill.

One class received 15-minute talks, with the aid of an interpreter if necessary, on preventable diseases. A kindergartner took charge of the children who were obliged to accompany the mothers. This class voluntarily requested instructions in English. Soup was served

after each class was dismissed. Another class of 25 Italian mothers received instructions on the proper food for children. A class of Italian mothers were taught to make clothing for children. The Woman's Club furnished the material, including trimmings, and a pattern publishing company contributed 1,000 patterns. A class of Bohemian mothers learned something about proper and improper methods of punishment and were shown how to make newspaper toys and finger plays.

In mining towns.—In three mining towns in Illinois—Auburn, Thayer, and Virden—during the summer when the mines have been closed and the men idle, an afternoon and an evening school has been conducted in each town, under the direction of Miss Frances Wetmore of Chicago. Small groups of women have been reached. The teacher made a house-to-house canvass, gathered the mothers together, and went to one of the homes, where instruction was given in the care and training of children, English speaking, sewing, and cooking. The same teacher taught the men English and civics in the evening. In spite of the heat, the newness of the work, and some previously unsuccessful attempts at night schools, about 100 men were under instruction.

Cooperation of National Organization for Child Welfare.—Thirty national organizations of women in the United States, representing a membership of 5,000,000, have united in the National Council of Women. This organization has joined the International Council of Women which includes councils of 26 different nations. Child welfare is a universal interest. A department of child welfare has been formed to promote cooperation of all, either by influence or by work. This is a new and larger avenue through which the welfare of the child may be promoted.

CHAPTER XVIII.

KINDERGARTEN EDUCATION.

By ALMIRA M. WINCHESTER, *Specialist in Kindergarten Practice, Bureau of Education*, and LOUISE SCHOFIELD, *Editor, National Kindergarten Association*.

EXTENSION OF KINDERGARTENS.¹

During the year 1914-15, the number of kindergartens increased from 8,825 to 9,486, providing an enrollment of 486,800 children, as compared with 465,868 during the preceding year. Complete figures for 1916 are not yet available, but a still further growth is evident. Of the kindergartens newly established during 1914-15, 620 were public and 41 other than public. Fifteen years ago private kindertens numbered practically twice as many as those in public schools.

California reports the largest number of new kindergartens; 119 classes were added to its public schools in 1914-15. This record is due mainly to the success of the field secretary of the National Kindergarten Association in inducing parents to petition for kindergartens as the State law permits.

The petition plan.—The method of work continued with such success has been, first, to secure resolutions on the part of the Federation of Women's Clubs, the Congress of Mothers, and the Women's Christian Temperance Union to have individual clubs secure signatures to petitions. The resolution passed by each organization in the State is then printed on the petition form used by the local branches in securing signatures.

Letters are subsequently sent to the presidents and secretaries of all local organizations telling of the law, urging them to take advantage of their privilege, and inclosing a proper form of petition to be signed, together with popular circulars to aid in awakening interest in the kindergarten. Every letter advises working with local school authorities, and puts special emphasis on the fact that care must be taken to secure as kindergarten teachers graduates from accredited

¹ The section on "Extension of kindergartens" was compiled by Miss Schofield, the remaining sections by Miss Winchester.

training schools. This work is carried on with the approval of the State superintendent of schools and of the commissioner of elementary schools.

Cities all over the State are visited for the purpose of arousing interest and enlisting active aid. The ultimate object of all this work, whether undertaken with groups or individuals, conducted personally by the field worker, or delegated to others, is to find the enthusiastic mother or father who will see that the petition is properly signed by the parents of 25 children of kindergarten age living within a mile of the schoolhouse, and presented to the school board.

A good example of the way in which the work is done may be shown by the campaign conducted in San Francisco during the past year. With the assistance of the Congress of Mothers and other local organizations, 40 petitions were secured for kindergartens in different parts of the city. These were formally presented to the board of education, which was asked to include in its school budget an appropriation large enough to establish and maintain 50 kindergartens. Up to this time there had been but 11 kindergarten classes in the public schools of the city.

The cooperation of the Chamber of Commerce and the Citizens' Educational League was enlisted. The League appointed a committee of three to aid in the campaign. In addition, valuable support and publicity were secured through the daily press.

The result of all these efforts was that the school authorities recommended to the county board of supervisors that 20 kindergartens be added to the public school system in San Francisco. This meant that if the board of supervisors passed favorably on the estimate made by the school board for these classes, approximately 1,000 more children, each year, would be receiving kindergarten training.

During the year since the Nevada kindergarten law came into operation, permitting establishment of kindergartens on petition, there have been but three new classes added to the five formerly maintained in the State. This slight increase may be explained by the fact that, so far as known, no one in Nevada has been working systematically to acquaint fathers and mothers with the advantages the law enables them to secure for their children. Such was also the experience of the first year under the California law, during which no special efforts were made to interest parents in its provisions, the increase in the number of kindergartens consequently being, in proportion, no greater than in Nevada.

Local workers in the latter State are hoping that some way may be discovered of employing the same means as are used in California to induce parents to work for kindergartens. This they believe

could best be done, as in California, by some one especially employed for the purpose, but it is a question whether the results which could be obtained in such a sparsely settled State would justify the expense involved. In how far similar results might be obtained through the already organized machinery of the women's clubs of the State is also a matter for conjecture.

Practically the same conditions that were found true of Nevada and California during the first year under the petition form of legislation have existed since 1905 in Florida, which at that date adopted a law permitting boards of education to establish kindergartens when parents guarantee the attendance of 25 children. The average annual increase in the number of kindergartens in Florida has not been more than two or three in recent years; at the present time the public-school classes in the State number only 10.

So far as known, no special efforts are under way in Florida to inaugurate a campaign of petitioning among parents so that the benefits of kindergarten training may be provided for more of their children.

Thus the petition form of legislation, unless vitalized by a campaign of petitioning, is no more effective than the so-called permissive law, which allows school boards to decide whether or not new kindergartens shall be established.

The only other State which authorizes petitioning for kindergartens is North Dakota, in which at least one-fifth of the voters in the larger districts (a majority in the smaller) must present a petition in order to have the matter considered by the school board. The comparative difficulty with which kindergartens are secured under such requirements is illustrated by the efforts of a woman in North Dakota during the year to have a kindergarten opened for children of her locality. In order to bring this about she had first to secure the signatures of practically 400 individuals. North Dakota opened four new public-school kindergartens during the past year, making a total of nine to date.

Extension through school boards.—In consideration of certain new attempts to make the establishment of kindergartens easy through improved legislation, and of some doubts as to the best type of law to work for, it is interesting to note the growth of kindergarten classes in States where the question of opening them is solely in the hands of the school authorities. There are 27¹ States in which kindergartens are established in this way. Some of them have the largest number of kindergartens in the country, as, for

¹ Arizona, Colorado, Connecticut, Delaware, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Utah, Vermont, Washington, West Virginia, and Wyoming.

instance, New York, with 4,764, New Jersey 615, Michigan 684, Ohio 469, Massachusetts 363, Illinois 325, Iowa 328, and Missouri 273. In several States the annual increase reaches as high as 30, 40, and even 50 classes.

This progress compares favorably with the California record during the past two years, when it is considered that in the localities in question there has been no State-wide campaign undertaken by a special worker.*

In communities in which the kindergarten movement has made little headway at the hands of school boards, no harm could arise from attempts to secure the petition form of legislation, and if a campaign of petitioning be conducted wherever the mandatory-on-petition law is passed, a large number of new kindergartens will undoubtedly be the result. Several States are working in this direction.

The States without special kindergarten legislation¹ are the ones that have fewest kindergartens, with the exception of two—Nebraska having 157 classes and Rhode Island 98. It is not surprising to find that whatever attempts are under way to secure legislation in the States mentioned are directed toward securing the form that provides for establishment by boards of education. In Georgia, where the law makes 6 the minimum age for entering school, thus prohibiting the use of regular school funds for the education of children under 6, a bill will be introduced this year providing for the establishment of kindergartens by boards of education. This is the third year in which such an attempt has been made. The bill is sponsored by the State Federation of Women's Clubs.

With a view to possible legislation in the near future, campaigns of education upon the kindergarten subject are being conducted either by mothers' clubs or kindergartners' associations in several States which now have no kindergarten legislation.

Extension through local community efforts.—So far as it is possible to judge from available information concerning the opening of individual kindergartens, with the exception of those started by women's organizations, the initiative has seemed to emanate most frequently from the public-spirited kindergartner who is interested either in getting her superintendent to start or add more kindergartens to the public schools in her vicinity, or in inducing school authorities to take over private kindergartens. It is the kindergartner, too, who, realizing the importance of creating and maintaining interest among the general public, has done much

¹ Alabama, Arkansas, Georgia, Maine, Maryland, Mississippi, Nebraska, New Hampshire, New Mexico, North Carolina, Rhode Island, South Dakota, Tennessee, Texas, and West Virginia.

to eliminate possible opposition to the kindergarten both before and after establishment. Many school superintendents and other educators in communities which up to the present time have had no kindergartens have been taking steps to start the movement by arousing interest among parents and by investigating requisites for equipment, course of study, and other matters relating to the maintenance of a kindergarten. Women's clubs of all varieties have been active in promoting individual kindergartens as well as in working for State-wide advancement through legislation.

Study of causes of discontinuance.—One aspect of the work of starting a kindergarten movement has had considerable light thrown upon it as a result of an inquiry into the causes which led to the discontinuance of a number of kindergartens during the past two years.

This investigation disclosed, in brief, that there was little or no opposition to the kindergarten on the part of grade teachers. The chief reasons given for discontinuing these classes were lack of funds, lack of room and facilities, and indifference on the part of school boards or parents. It was evident that in most of the places covered by the inquiry the kindergarten was regarded as experimental, and at best a luxury, and was not maintained in proper relation with the public educational system. It must be concluded from this condition of affairs that the kindergarten had not demonstrated to parents and school authorities its right to live; had not been maintained in such relation to the community generally that its abandonment would be thought of last, not first. It is clear that what is most needed, when inaugurating a kindergarten movement in any community, is to educate the people generally and keep them informed regarding the fundamental purpose of the work, and especially to show them that it bears a vital relation to the whole course of education and is not merely a more or less superfluous day nursery to keep little children amused until they are old enough to enter the primary grades.

It was also apparent from this investigation that to establish kindergartens in small places too poor to maintain them is a waste of effort. When such kindergartens are tried and fail, the abandonment not only leaves a local hostility which must be removed before the work can be resumed, but produces an impression upon neighboring communities far out of proportion to the importance of the failure.

To aid in the work of arousing interest in the kindergarten, starting kindergarten classes, and successfully maintaining them, as well as securing improved legislation, the United States Bureau of Education has added considerable helpful material to its educational propaganda, including bulletins, leaflets, exhibits, motion pictures,

and lantern slides on the subject of kindergarten extension. This material is available for free distribution and popular display.

THE KINDERGARTEN AND THE ELEMENTARY SCHOOL.¹

*National Council of Primary Education.*²—Among recent educational events, one of special significance to kindergarten teachers is the formation of the National Council of Primary Education, an organization which came into being quite spontaneously at the meeting of the Department of Superintendence of the National Education Association at Cincinnati, Ohio, February, 1915. Membership in the council is open to teachers, supervisors, principals, and all persons interested in the educational problems of the first four school years; and the avowed purpose is "to secure the cooperation of all those interested in primary schools for their betterment, through (1) greater use of the activities, (2) greater freedom of method, (3) a closer relation with the kindergarten and with the grades above." It is evident that a definite, conscious movement reaching toward better integration with the kindergarten has been begun among the primary teachers.

At the first annual meeting of the council, February 22, 1916, in Detroit, Mich., the topic selected for consideration was "A greater use of activities in the primary school." Taking part in the discussion were assistant superintendents, primary supervisors, and primary teachers from Minneapolis, Minn., Toledo and Cincinnati, Ohio, Baltimore County, Md., Pittsburgh, Pa., and Harrisonburg, Va. Frequent references were made to the valuable assistance given by kindergartners to the primary teachers in these cities. "Life-savers" was the characterization made by Anna Logan, of Cincinnati, in speaking of the arrangement by which certain kindergarten teachers give half the day to kindergarten work and during the other half assist the first-grade teacher. Under these conditions games, hand-work, and excursions are possible, and—

the regular teacher is enabled to work with a small group while the visiting kindergartner takes charge of the rest of the children. Better bookwork is thus accomplished, and both kindergartner and primary teacher have an opportunity better to understand each other's methods, problems, and point of view.

A Louisville suggestion.—The kindergartners and the primary teachers of Louisville, Ky., have advanced beyond the first stages of friendliness and general interest in one another's work into concrete, specific forms of related working plans. These were described by Mary Hill, supervisor of public kindergartens in that city, in an address before the meeting of the kindergarten section of the

¹ This section and those following were prepared by Miss Winchester.

² See also Chapter VI, Elementary Education, p. 97.

National Education Association in New York. The subject was "Educational values which the child carries over from the kindergarten into the primary grades." The preliminary steps consisted in the contribution from every kindergarten teacher of a list of 10 stories, 10 games, 10 poems, 10 songs, 10 pieces of handwork, 10 definite habits, etc., with which a child should be familiar and skillful as a result of a year in kindergarten. These lists were studied by a "jury" of expert teachers, who selected therefrom certain stories, games, poems, songs, handwork, habits, etc., with a view to their usability in the first grade. A copy of the selected list, or "minimum course for kindergarten," was then sent to each kindergartner and first-grade teacher, with the understanding that henceforth the grade teacher may assume that the kindergarten children know these specific things and have these specific habits. The grade teacher *must not repeat* these stories, games, and pieces of handwork, unless she repeats them with *additional combinations*.

During the latter half of their year in kindergarten the children make booklets of various pieces of handwork, which are to be carried by them into the first grade and utilized as reading devices.

Another excellent practice in the Louisville schools is the changing of the term "seat work" in primary grades to "period of independent expression," with a corresponding change in content; such work is now related to the children's experiences.

Exhibits of kindergarten work.—The exhibits of the past year reflect the movement toward better coordination between kindergarten and primary education. At the International Kindergarten Union meeting in Cleveland, May, 1916, the exhibit contributed by the Cleveland schools consisted of kindergarten and first and second grade handwork so arranged as to make it clear that while materials and processes are the same in all three grades the work is not repeated in the same way, but is planned with a view to calling for progressive mental and manual ability on the part of the children.

The kindergarten exhibit at the National Education Association meeting in New York, July, 1916, was housed in the Washington Irving High School as part of a large and interesting display of public-school activities. In place of the ordinary conventional arrangement of series of handwork, the committee representing the public-school kindergartners of New York City presented a demonstration of the educational values found in kindergarten experiences. In a leaflet of description and interpretation the basis for this unusual organization of an exhibit was set forth:

The form of this exhibit is somewhat of a departure, and is offered by a committee representing the public-school kindergartners of New York City who are interested in education as an unbroken process from the home through the kindergarten to the university.

The committee has taken into consideration the fact that the school has endeavored, more or less successfully, to formulate the values of life along educational lines designated for convenience as certain school subjects. These subjects represent not only a body of knowledge, but habits and attitudes which should be cultivated in a child.

This exhibit is an unpretentious effort to demonstrate the fact that these school subjects should begin to shape in the kindergarten—consciously in the mind of the kindergartner, unconsciously in the experiences of the child.

The exhibit consisted of (1) a room equipped for kindergarten purposes and filled with suggestive materials, such as toys, wall decorations, window transparencies, nature experiments, etc.; (2) a series of six panels mounted with photographs of children's kindergarten activities and with pieces of handwork. In accordance with the scheme of organization, the "values of life" educationally expressed made the headings for the panels, Industrial Arts, Civics, History, Geography, Nature Study, Composition, Fine Arts, and Mothers' Clubs' Activities.

The method employed in arranging the photographs and handwork was explained in the leaflet:

The endeavor has been to emphasize each value in three ways:

(1) As a living vital experience (it is only through photographs that such experiences can be presented in an exhibit).

(2) The reaction of the child in his desire to re-live the experience through play and constructive materials.

(3) The reaction of the child shown in his desire to record his experience.

It was recognized by the committee that the limitations of an exhibit always give undue prominence to handwork, and that the most important things done in kindergarten can not be visualized; also that the child's experiences are for the child himself, unseparated and unclassified. It is only for the mature mind of the teacher and the student of education that these experiences are analyzed and organized.

The "living vital experience" on the panel dealing with industrial arts was presented by means of a photograph of children visiting a blacksmith. The printed explanation was as follows: "Social industrial ideals presented through adult activities are observed by children through visits to the baker, farmer, market man, shoemaker, blacksmith, wheelwright, carpenter, toyshop. These experiences are re-lived through the free play and organized games in the kindergarten." Then followed suggestions as to means of helping the children to make daily practical application of ideals of industry and good workmanship: "Putting on and taking off wraps; dusting room; washing lunch dishes occasionally; making dolls and dolls' clothes; furnishing doll's house; constructing wagons; butter mak-

ing; biscuit making." A note was added to the effect that, while paramount importance is not attached to these activities as forms of industrial education in the kindergarten, they are valuable as a means of presenting ideals of workmanship. The constructive materials were canvas and worsted for sewing, and clay marbles modeled and then strung by the children. Paper cutting was the medium of expression for recording the experiences.

The "living vital experience" on the panel dealing with civics was represented by photographs of children visiting a fire-hall and a museum. The accompanying comment was: "Civic ideals presented through adult activities are observed by the children and re-lived through free play and organized games. These include fireman, policeman, soldier, sailor, knights; also excursions to public buildings and monuments." Practical application of civic ideals to daily life involves: Caring for the room; taking care of other children; taking care of the school grounds; keeping scraps picked up from floor and street; participating in fire drill. Drawing and paper cutting were the materials used for recording the experiences.

The same procedure was observed in the panels relating to history, geography, nature study, composition, and fine arts.

KINDERGARTEN TRAINING SCHOOLS.

The curricula.—The results of a study of kindergarten training schools in the United States were published as Bulletin, 1916, No. 5, of the Bureau of Education. One immediate outcome of the publication was the calling of an informal conference of kindergarten training teachers and kindergarten supervisors at Cleveland, Ohio, just previous to the International Kindergarten Union convention in May, 1916. The purpose of the conference was to discuss the comparative curricula, more especially the wide differences in the number of recitation periods devoted to the various subjects in the various schools. For instance, a comparison of figures in Table 5 of the bulletin showed that the amount of time given to physical training ranged from 15 periods (90 minutes in length) in one school to 255 periods (46 minutes in length) in another school; the time given to music ranged from 14 periods (60 minutes) to 228 periods (53 minutes); that given to psychology and child study ranged from 12 periods (40 minutes) to 360 periods (52 minutes). A glance at the table herewith shows that the least amount of time spent in practice-teaching was 4 weeks in a two-year course; the greatest amount, 76 weeks in a two-year course.

The following table presents the extremes of the variations:

Variations in the time given each subject.

Subjects	Minimum.		Maximum.	
	Periods.	Minutes in each period.	Periods.	Minutes in each period.
Physical training.....	15	90	255	46
Music.....	14	60	228	53
Art.....	12	90	280	40
Nature study.....	5	60	200	45
Literature and stories.....	6	90	312	45
Psychology and child study.....	12	40	360	52
Games.....	10	60	120	60
Gifts.....	14	60	200	45
Occupations.....	20	45	200	50
Program.....	9	55	160	45
"Mother Play".....	7	60	160	45
"Education of Man".....	6	60	80	45
Other books on kindergarten.....	2	45	178	55
General pedagogy.....	6	60	200	45
Primary methods.....	3	90	580	46
History of education.....	5	45	180	50
Other related subjects.....	4	90	674	40

What should constitute a minimum of essentials in respect to the number of recitation periods in all subjects, and to the amount of time devoted to practice teaching, and how a more uniform standard can be secured, were the questions into which the problem resolved itself. It was felt that ways and means of arriving at some degree of conformity to a norm should be devised by a thoroughly representative body of kindergartners; consequently the executive board of the International Kindergarten Union was asked to name a committee to undertake the task.

Kindergarten-primary courses.—There is a distinct increase in the number of schools, public and private, offering kindergarten-primary courses. The students in such schools receive preparation for teaching in the first two or three grades as well as in kindergarten, and State certificates entitling them to do so are conferred upon those who graduate in such sources. Under these circumstances the necessity for lengthening the course from the customary two years to three years is becoming more urgent.

Illinois legal enactment.—Changes in the school code of Illinois have made it possible for kindergarten training schools that conform to certain requirements to be legally recognized as "higher institutions of learning."

Response to appeal from Porto Rico.—Through the United States Bureau of Education the commissioner of education for Porto Rico has made an appeal for assistance in making it possible to establish kindergartens in that island. Ready responses have been made by seven training schools which offer free scholarships to native Porto Rican girls who are able to come to the United States for preparation and then return to teach in the island.

THE KINDERGARTEN IN SCHOOL SURVEYS.

The kindergarten has received considerable attention in recent city school surveys. The report of Dr. Frank McMurry on the New York City kindergartens, in his "Elementary School Standards," is sufficiently well known.

In *Butte, Mont.*, the survey commission (1914) made urgent recommendations for the establishment of kindergartens for "all of the children between 4 and 6 years of age in the district," characterizing as "a marked defect of the school system" the lack of kindergarten instruction, and also the "absence of the kindergarten spirit in the early primary grades." It was recognized that—

the kindergarten does much for the social training of children, that the play activities which are to be found there have a very definite educative value, and that the free intercourse among children and teachers does much to lay the foundation for later intellectual development.

In the published report of the *Portland (Oreg.) survey* the portion dealing with "Needed reorganizations and expansions of the school system" includes kindergartens as a necessary group, together with elementary schools, intermediate schools, and high schools. The commission suggests that the school authorities should work as rapidly as possible toward the practical ideal of making "kindergarten instruction available for all children of the district." Another suggestion was that the kindergarten work should merge naturally and gradually into that of the first grade, also that first grade work should be "modified to more nearly meet that of the kindergarten." A supervisor in charge of both kindergarten and first grade is considered the best medium of coordination.

The *Salt Lake City (Utah) survey* commends the kindergartens as far as they exist; there is need for more of them. The commission reported that the more prosperous parts of the city are well supplied, but those sections in greatest need are overlooked.

Where there is great need there is naturally little realization of the need, and therefore no demand has made itself felt. This does not relieve the school department of the duty to look out for the portions of the city in which the people do not know how to look out for their own interests.

Oakland, Cal., reported in 1915 that more kindergartens were needed, and that probably one should be established in connection with each school of four or more rooms in the city. The report continues:

The value of good kindergarten instruction for children has become so well established that it is not deemed necessary to present any arguments in favor of this form of instruction.

The most recent survey dealing with the kindergarten was that of *Cleveland, Ohio*. In the volume entitled "Measuring the Work

of the Public Schools" occurs one chapter on "Kindergartens and primary grades." The summary of the chapter contains the following points:

(1) That the kindergartners are unsupervised and are dominated by a training school which is outside the school system; (2) that the equipment of the kindergartens is superior to that of the primary grades; (3) that the effects of kindergarten training are by no means clearly defined and that they are often regarded by primary teachers as of doubtful value; (4) that the teachers are not in close touch with one another and not, in general, in sympathy with the mode of sending children from the kindergarten to the first grade.

As an offset to the negative comments, however, the recommendations are positive in their nature and include suggestions—

that the training of kindergarten teachers be more intimately related to the work of the city training school for teachers; that the first grade and the kindergarten be organized in such a way that there shall be a more equitable distribution of teaching staff and material equipment; that promotion from the kindergarten to the first grade be based on maturity of pupils and not merely on age; and that a single supervisor be put in charge of the kindergartens and primary grades.

The following table serves to indicate the numerical status of the kindergarten in the cities just mentioned:

Kindergarten statistics of five cities for school year ended June 30, 1916.

Cities.	Population, 1910 census.	Kindergartens.	Children enrolled.	Paid teachers.
Butte, Mont.	39,165	6	175	6
Portland, Oreg.	207,214	0	0	0
Salt Lake City, Utah.	92,777	13	755	20
Oakland, Cal.	150,174	60	2,391	30
Cleveland, Ohio.	560,663	186	7,544	187

THE KINDERGARTEN AND ABILITY TESTS.

Tests and measurements applied to children in the kindergarten may at first glance appear contradictory to the very nature of the kindergarten itself, for spontaneity does not seem to lend itself gracefully to scientific measurements. Yet there are various kinds of ability, even in little children, that are decidedly measurable, and in pursuance of the present-day endeavors to bring the kindergarten and the grades into organic relations, certain types of tests have been found to be both possible and serviceable.

The proper evaluation of the kindergarten has long been a subject of conjecture and debate. It is generally believed that certain habits, mental attitudes, and forms of skill are developed by a year or so in a kindergarten, but there remains the task of showing by facts that something really does happen in the child. In past years the usual basis for judgment as to the value of the training was

the rate of speed with which kindergarten children subsequently accomplished the work of the grades.

A more scientific approach to the problem is now under way. To a committee of experienced kindergarten teachers has been intrusted the responsibility of formulating a kindergarten "curriculum" by whose standards the worth of the year in kindergarten may be judged, and of preparing a series of tests based upon these standards. The tests are then to be handed over to about 50 selected kindergarten teachers, who will know how to apply them and how to make entries at the beginning and again at the end of the year for the same children. From these 50 carefully kept records it should be possible to make a set of scales for testing the ability of kindergarten children in their various achievements. These scales can then be circulated among kindergartners in general, and reports from them on their own work as judged by these tests will have an actual scientific and fact value.

The dangers and limitations of tests and experiments are obvious; comparatively few institutions are so situated that experimentation and measurements of a systematic and worthy nature can be carried on in them. Fortunately, however, those who are leaders in the movement are in thorough agreement as to the necessity for safeguarding children from immature and inexperienced teachers and for insisting that the work be done sincerely and quietly, free from premature exploitation, under conditions whereby scientific records can be kept.

In some training schools the normal students are allowed to apply the tests; for, while the use of student labor in psychological processes is recognized as of questionable wisdom as far as the value of the data is concerned, the value of such work to the students themselves is considerable. During the past year, Elizabeth Ross Shaw, chairman of the child study committee of the International Kindergarten Union, has trained members of the faculties of two training schools to give general tests of mental endowment; and the senior students of one of the schools were trained to test children.¹

OTHER ITEMS.

Outdoor kindergarten work.—Among the inquiries carried on by the Bureau of Education during the past year was one pertaining to open-air kindergartens and outdoor work in the ordinary kindergartens. Responses indicate that the kindergarten teachers are contriving, in spite of the difficulties of climate and popular objections to exposure, to have their children out of doors a great

¹ For examples of the test of orientation, see *Kindergarten and First Grade*, September, 1916, pp. 304-308.

deal. In many instances playground apparatus has been added to the equipment, and many other forms of kindergarten activity are held in the open air whenever weather conditions make it possible. As might be expected of kindergartens in Hawaii, bathing suits are included as part of the regular equipment of the free kindergartens.

Demand for reading courses.—From several sources have come requests for organized and supervised courses of reading for kindergarten teachers. In the multitude of books on education, teachers feel themselves bewildered, and they ask for some guidance in the matter. A committee of kindergartners has taken the task in hand, and will, before long, be able to respond to the expressed need.

New books on the kindergarten.—The library shelves of the kindergartner must be enlarged to take in two recent publications which are of unusual interest. "Kindergarten Theory and Practice," by Nora Atwood, is a thoroughly practical presentation of kindergarten procedure and the meanings which lie beneath the procedure. In one chapter the nature of the kindergarten is set forth, and two types are described; in another the accessories which should make a favorable environment are discussed; other chapters deal with the program, the use of the gifts, the use of the story; and the final chapter discusses the relation of the kindergartner to the primary teacher. The book carries out fully the avowed purpose of the writer to make it helpful and suggestive.

"Froebel's Kindergarten Principles Critically Examined," by William Heard Kilpatrick, is a scholarly and thoughtful presentation of certain phases of Froebelian doctrine. It is intended to be studied by kindergartners and students of education in general. The book contains much that makes it a source of stimulus and argument. In his preface the author makes plain that the reason why his criticism seems so largely negative is because, "What all accept, demands little discussion." Emphasis has therefore been placed upon the more debatable aspects of Froebel's principles.

Susan E. Blow.—No record of the events connected with kindergarten education for the year 1915-16 would be complete without at least a reference to the passing of Susan E. Blow, whose contribution to the establishment and development of the kindergarten in America has been greater and more far-reaching than that of any other person. From all sides have come tributes of admiration, praise, and affection for the large-souled woman who devoted her entire time, interest, skill of authorship, and wealth for the best good of little children.

CHAPTER XIX.

EDUCATIONAL HYGIENE.

By WILLARD S. SMALL,
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The volume and variety of activities in the field of educational hygiene are constantly increasing. The topics selected for treatment in this chapter are military training, physical education, social hygiene, eye hygiene, ventilation, and rural school hygiene.

PREPAREDNESS AND GOOD HEALTH.

Once in a lifetime, or, it may be, once in a century, the common mind of a nation is so aroused and unified as to make possible far-reaching educational reconstructions. Such was the case in the German States after the Battle of Jena. Such particularly is the case in the United States to-day. "Preparedness" has taken firm hold upon the national mind. The preparedness psychosis is accompanied by hysteria and ghost dancing, but it has been productive also of a real searching of the national heart. Beneath the confusion of tongues and the naïve fancy that preparedness can be bought with great armaments and with mercenary soldiership, there is a gradually forming resolution to understand and to achieve real preparedness. There is sudden recognition of the truth that the very foundations of preparedness for war and for peace are physical and moral discipline. It has required the scourge of fear, born of the horrors of the great war, to make vivid and real the thing that "everybody has known." The statistics of rejection of applicants for enlistment in the Army and Navy have been available for years and have been quite as significant heretofore as they are in 1916. Under the stimulus of the preparedness issue, they are suddenly exploited and uncritically interpreted as symptomatic of physical degeneracy of the Nation. In interpreting these figures it must always be remembered that the physical standards for recruits are very rigorous, and that most of the recruits in time of peace are young men who are temporarily out of employment, this second fact carrying the implication of a large admixture of physical incompetency. Allowing for these facts, however, the figures are sufficiently impressive.

In the year 1915 there were, in round numbers, 160,000 applicants for enlistment in the United States Army. Of these 117,000 were rejected upon preliminary examination, and 7,000 of the remaining 43,000 were rejected upon detailed medical examination; 30,000, or about 20 per cent, were accepted.

The records of the Bureau of Medicine and Surgery, United States Navy Department, for the year ended December 31, 1914, show that, of the 72,410 applicants for original enlistment in the Navy and of 20,674 in the Marine Corps, 76 per cent of the former and 82.4 per cent of the latter were rejected for physical and mental disabilities; and that, during the year ended December 31, 1915, there were 73,028 applicants for original enlistment in the Navy, and 21,676 in the Marine Corps, of whom 75.4 per cent were rejected by the Navy, and 83 per cent by the Marine Corps, for like causes.¹

The following table gives the distribution of causes of rejection in percentages:²

Applicants—Percentage of rejections—Causes.

	Total number of applicants.	Rejected for all causes.	Deformities.	Defective hearing.	Other diseases of auditory apparatus.	Defective refraction.	Other diseases of the visual apparatus.	Flat feet.	Heart affections.	Nasal abnormalities.	Defective teeth.	Tuberculosis or suspects.	Mental diseases.	All other causes.
<i>In 1914.</i>														
Navy.....	72,410	76.0	7.48	1.04	0.53	14.11	0.86	10.77	5.79	0.72	8.61	1.29	0.37	48.37
Marine Corps	20,674	82.4	4.06	1.54	.33	11.24	.41	11.21	4.16	.83	6.30	.69	.21	58.95
<i>In 1915.</i>														
Navy.....	73,028	75.4	6.65	1.11	.60	13.241	.14	11.27	3.66	.70	11.49	.92	.34	48.81
Marine Corps	21,676	83.0	3.24	1.70	.29	10.19	.46	10.54	5.54	1.08	7.49	1.13	.39	57.91

The really impressive thing revealed by these figures is not that they demonstrate or even suggest physical degeneracy, but rather the fact that a very large part of the disabilities recorded are of such nature that they might have been corrected or prevented in childhood by health supervision in the schools, adequate medicophysical examination, corrective follow-up work, proper exercise and instruction in personal hygiene, and hygienic environment. Practically

¹ Dr. T. Clark (U. S. Public Health Service): *The Physical Care of Rural Children*. Proc. Nat. Ed. Assoc., 1916.

² Ibid. This table does not tell the story as completely as would be desirable: (1) The "all other causes" group is entirely too large. This includes such causes as underheight and underweight, which do not necessarily connote physical inefficiency. (2) There is probably a disproportionate amount of rejection on account of visual and dental defect. Requirements in these respects are very rigid and such defects are easily detected. This qualification cuts both ways: (a) Individuals rejected for these defects may have other more serious defects that are unrecorded; (b) individuals having these defects in sufficient degree to warrant rejection may be absolutely sound in other respects and, hence, very efficient physically.

50 per cent of the specified disabilities recorded by the Navy and 40 per cent recorded by the Marine Corps would have yielded to remedial measures in childhood. It is possible that some of the "all others" belong in the same category.

It would be illuminating if the statistics could be compared with similar statistics for graduates of high schools. Unfortunately, such statistics do not exist. Few school systems provide for continuous and detailed examinations during the elementary-school years and fewer still in the high-school years. The high-school graduates ought to be a selected group, physically as well as mentally, but most persons who are familiar with the situation would hesitate to predict that more than 50 per cent of the boys graduating from the high schools would meet the Army and Navy standards. The condition of those who are eliminated before graduation and of the much greater number who never reach the high school is even less favorable.

It is this formidable fact—that the educational organization has tolerated physical inefficiency, even if it is not a contributing cause—that the interest in preparedness is bringing acutely to the national consciousness. The realization of the folly and extravagance of such a lack of policy will become more vivid in the next two or three years. Professional educators will be a trifle ashamed of "resolving" at educational conventions that health is of paramount importance in education and forgetting about it when they return to their own routine. School boards and boards of estimate will be more likely to see the folly of spending large sums "now devoted annually to the reeducation of children held back in their classes in part, at least, by incapacitating though preventable and curable physical and mental defects,"¹ and will think twice before making appropriations for health work in the schools on so penurious a scale that the work is crippled at its birth. The public, at least the thinking part of the public, will perhaps shake off its good-natured indifference and recognize the validity of the health programs urged by earnest school and health administrators and by civic and philanthropic agencies. There is sufficient movement of the waters in many places to justify the hope, at least, that out of the preparedness psychosis there may be developed a genuine reconstruction of policy in regard to the place of health in education.

COMPULSORY MILITARY TRAINING.

Naturally enough the first fruit of this new spirit was a sudden, sporadic but widespread, and very uncritical demand for compulsory military training in the high schools and even in the elementary schools.

¹ D. B. Armstrong, M. D., *Social Aspects of School Hygiene*, Am. Jour. Pub. Health, vol. 5, No. 12.

In the first flush of enthusiasm no one stopped to inquire very deeply what military training really involves, what is the specific physical and intellectual character of the raw material, the adolescent boy that is to be trained, and the specific national conditions, environmental and psychological, that must be met if preparedness is to be real, permanent, and constructive.

In some instances "military training," consisting merely of infantry drill, has been introduced without adequate consideration of the fitness of this form of exercise for the physical character of young boys and of the reaction that may result from it. The first bills and drafts of bills that were introduced into the national and State legislative bodies were characterized by the same uncritical, almost hectic haste.

The reaction of sober second thought, however, has come quickly, and the relation of military training to school organization is becoming fairly clear. Military training in a strict and technical sense will not be grafted upon the schools, but military training in the sense of a comprehensive program for physical, moral, and civic education, in which some appropriate military exercises may be included, is likely to find its way into all schools.

The reasons for this are inherent in the constitution of boy nature and the nature of military drill.

In the first place, observes Capt. Godfrey,¹ of the Regular Army, speaking of Boy Scout activities:

Soldiering itself is a man's business and is not for the boy under 18. It would not be advisable to equip Scouts with the rifle and to teach them the regulation infantry drill. To do so would be to repress initiative that needs self-expression. It is the time to instill not the minutiae of the drill ground but the fundamental principles of the good soldier which scouting stands for so squarely.

Gen. Baden Powell put this truth bluntly in three words: "Drill is wooden." Employed as a form of exercise in the formative period of early adolescence it tends not only to "repress initiative" but also to produce stiff, angular, and inelastic muscular action.

Another aspect of the harm that may be done by premature military drilling is expressed trenchantly by Dr. C. Ward Crampton,² director of physical training in New York City:

I am strongly opposed to military drilling of elementary school boys. They are too young to be soldiers. Only men can be such. It is true that by the manual of arms and the school of the soldier they learn much, but these things can be learned better by more appropriate physical training methods. At the best, they only become toy soldiers; they appeal to the populace as "cute,"

¹ See "Scouting," May 15, 1916. The article is by Capt. Stuart Godfrey, instructor in West Point. Capt. Godfrey's words have special force. He is an inspiring leader of boys as well as an Army officer.

² A Physical Training not Confined to Hard Muscles. "Scouting," May 15, 1916.

and an absolutely wrong ideal is established. This training, taken before the boys are ripe for it, breeds a distaste for the real training which should follow at its appropriate time.

A wave of enthusiasm for military training has swept over the country. If this spends itself in the military training of infants, nothing but waste and harm will result.

It must be remembered that this statement would apply in a large measure to the first years of the high schools. It is a matter of physiological age, not of school placement.

A third important consideration is the effect upon health. The popular belief that military drilling per se is a wholesome and effective form of physical exercise is not supported by facts. For the youth whose growth is practically complete it is not harmful and may be beneficial, but for the boy in the plastic developmental stage of early adolescence it has little value and may be positively harmful. As stated above, it tends to produce "stiff, angular, and inelastic muscular action." This in itself is bad, as bad as the older systems of physical training that aimed at hard, bulging muscles—excessive local development—and neglected the fundamentals of wind and digestion.

Military training in the schools conceived as military drilling is undesirable and unavailing; military training conceived as a "comprehensive program for physical, moral, and civic education," including the "fundamental principles of the good soldier," is desirable and even necessary. It offers the possibility of unifying and ennobling the now confused and disjointed activities in the field of physical and moral discipline. The physical and moral values of both gymnastics and athletics are well understood, but both lack comprehensive and unifying motive. All systems of gymnastics are individualistic. Their appeal is to the desire of the individual for physical perfection. Competition is narrowly individualistic. Systems of athletics are mostly based upon group competitions, and if properly managed are very valuable, not only for physical development but also for training in the very fundamentals of social morality. But the philosophy of athletics is the philosophy of play, and the philosophy of play is the philosophy of instinct—a philosophy that is not comprehensive enough to serve as a sole basis of physical and moral education. Military training rightly conceived includes these motives and subordinates them to the ideal of patriotism.

The fighting instinct in man is ancient and seemingly ineradicable. The "moral equivalents for war," if discovered, are not yet effective. The purpose of military training should be to capitalize this ancient and ineradicable instinct; to exercise, train, and educate it; to

make of it a productive educational investment and compel it to yield adequate dividends in physical and moral discipline.¹

The program worked out by Lieut. E. Z. Steever, U. S. A., in the high schools of Wyoming approximates this ideal.² In the Wyoming plan all cadets are organized into competition units. Leaders take "turnabouts" choosing the members of their units, so that each unit (squad, platoon, or company) is made up of an equal number of strong, medium, and weak lads. All the work is done by competition units. There are wall-scaling units, infantry-drill units, troop-leadership units, scholarship units, field-firing units, camp and field units.

Sponsors are elected from the girls in the mixed school and assigned to the competition units. The sponsors are in every sense members of the cadet organization. They attend all drills, are the leaders in all social functions, and while they do not actually drill, are entitled to and receive such individual rewards as may be won by their units. Medals, ribbons, and distinctive marks on the uniform are given each member of a winning unit, the sponsor, of course, included. Each cadet organization is based on the voluntary enlistment plan. The cadet classes are held generally during and not after school hours, and credit toward graduation is awarded therefor. Cadet tournaments are held during the school year between the different high schools, to which the public is invited, and at which are held infantry drill, wall scaling, field firing, and camp and field and troop leadership competition "games."

On the basis of the Wyoming experience the following system is advocated:

1. Cut the school year into separate, short, intensive training periods, working up through preliminary to final competition dates, with the fixed competition units.

2. September 1 to December 31, wall-scaling and calisthenic events; minimum of drill, maximum of body building.

3. January 1 to February 28, troop-leadership competitions, 12-inch Gettysburg war-game map. Include military policy of the United States.

4. January 1 to February 28, minimum of drill, maximum of gallery practice, group competitions.

5. March 1 to May 7, minimum of drill, maximum of range practice, and field-firing competitions.

6. May 8 to June 15, minimum of drill, maximum of camp and field problems, competitive between high schools.

7. All through school year, commencing in the spring and running through the following fall and winter, take boys into camp each week end and harden them to the rigors of camp life. Teach them sanitation, cooking, woodcraft, simple field engineering, plains craft, castramentation, sketching, scouting,

¹ See *Military Training in the High School: How and Why.* (Small.) Proc. N. E. A. (Dept. of Sec. Educ.), 1916.

² The Army War College has issued a brief bulletin describing the plan. An interesting popular account may be found in *Everybody's Magazine*, Feb., 1916.

patrolling, the service of security and information, and qualify them as guides in their own immediate surrounding territory.

8. Summer camp immediately after closing of school, 14 days.

THE NEW YORK MILITARY COMMISSION IN RELATION TO PHYSICAL TRAINING.

New York is the first State to respond to the "wave of enthusiasm for military training" by the enactment of military physical-training legislation. This legislation epitomizes accurately the present status of responsible public opinion upon the question of school military training and its relation to physical education—the confusion and indecision in regard to the former and its clarity and certainty in regard to the latter. The laws enacted are two in number:¹ One, an amendment to the military law providing for the creation of a "military training commission" and for instituting compulsory "military and disciplinary training"; the other, an amendment to the educational law providing for compulsory "physical training and discipline" for all children of 8 years and over in all schools of the State, public and private.

The important feature of the military amendment, apart from the creation of the military training commission (which is the essential feature), is the requirement that—

All boys above the age of 16 years and not over the age of 19 years, except boys exempted by the commission, shall be given such military training as the commission may prescribe for periods aggregating not more than three hours in each week during the school or college year, in the case of boys who are pupils in public or private schools or colleges, and for periods not exceeding those above stated between September 1 of each year and the 15th day of June next ensuing in the case of boys who are not pupils.

The exemptions are liberal, so liberal indeed as to make compulsory military training a penalty for school attendance after 16 years of age. "Any boy who is regularly and lawfully employed in any occupation for a livelihood shall not be required to take such training unless he volunteers and is accepted therefor."

The military training commission consists of three members, "the major general commanding the National Guard, ex officio, who shall be chairman of the commission; a member to be appointed by the board of regents of the university of the State; and a member to be appointed by the governor."

The relation of the commission to physical education is shown in the following provisions. It is specifically empowered to—

appoint and at pleasure remove an inspector of physical training at a salary not exceeding \$5,000 a year and other assistants and clerks and employees at

¹ The legislation as originally proposed was in one bill, an amendment to the military law. The thoughtful educators of the State, under the leadership of Commissioner Finley, brought about the modification into two bills. Not all confusion was eliminated, but the essential integrity of the State educational authority was preserved.

salaries to be fixed by the commission; provide for the observation and inspection of the work and methods prescribed under the provisions of this article or under the provisions of the education law relating to instruction in physical training prescribed after conference with the commission; and to prescribe the powers and duties of the inspector of physical training.

The commission further is authorized to—

advise and confer with the board of regents of the University of the State of New York as to the courses of instruction in physical training to be prescribed for elementary and secondary schools as provided in the education law.

In order to more thoroughly and comprehensively prepare the boys of the elementary and secondary schools for the duties and obligations of citizenship, it shall also be the duty of the military training commission to recommend from time to time to the board of regents the establishment in such schools of habits, customs, and methods best adapted to develop correct physical posture and bearing, mental and physical alertness, self-control, disciplined initiative, sense of duty, and the spirit of cooperation under leadership.

The second law providing for State-wide physical training requires that—

all male and female pupils above the age of 8 years in all elementary and secondary schools (public and private) shall receive as part of the prescribed courses of study therein such physical training as the regents, after conference with the military training commission, may determine.

It further requires that the time shall not be less than 20 minutes a day; that competent teachers shall be employed; that development of correct physical posture and bearing, mental and physical alertness, self-control, disciplined initiative, sense of duty, and the spirit of cooperation under leadership be emphasized. The board of regents is required to prepare courses of study. Most important of all is the provision for payment by the State of part of the salary for teachers of physical training.

“The virtue of a thing is in the application.” The personnel of the commission is of radical importance. The major general commanding the National Guard of the State, Gen. O’Ryan, is ex officio a member and chairman. The other two members are Commissioner Finley, named by the board of regents, and Dr. George J. Fisher, appointed by the governor. Dr. Thomas A. Storey, professor of physical education in the College of the City of New York, has been appointed by the commission as State inspector of physical training. The commissioners and the inspector worked continuously during the summer months and have formulated a comprehensive program for carrying out the provisions of the two laws; the schedule for physical training in the schools of the State as outlined in this program is as follows:

ELEMENTARY SCHOOLS.

I. Grades 3A to 6B inclusive—

1. Physical training A: Correlation with school medical inspection, daily class inspection by regular class teacher.
2. Physical training B: A five-minute setting-up drill at the beginning of each class period, or at least four times every school day, directed by regular class teacher.
3. Physical training C: Recitations in hygiene, two 10 or 15 minute periods a week, under regular class teacher or a teacher especially assigned to this work.
4. Physical training D: Organized play, one hour each day under the regular class teachers or special teachers, or both.

II. Grades 7A to 8B inclusive—

Same requirements as in I above, with the addition of:

Physical training E: Gymnastic drills and marching, two periods a week, minimum 30 minutes for each period, under special teacher of physical training.

SECONDARY SCHOOLS.

For all terms.

1. Physical training A: Correlation with school medical inspection, daily inspection of every class by the regular class teacher.
2. Physical training B: Five-minute setting-up drills at the beginning of each class period, or at least four times every school day, under the direction of the regular class teacher.
3. Physical training C: Recitations in hygiene, two 10 or 15 minute periods a week, under the regular class teacher or a teacher appointed for this special work.
4. Physical training D: Organized play, recreational exercise and athletics one hour each day under special teachers of physical training assisted by other teachers in the school assigned to such work as a part of the regular schedule.
5. Physical training E: Gymnastic drills and marching, two periods a week, minimum of 30 minutes for each period, under direction of special teacher of physical training.

OTHER ASPECTS OF PHYSICAL EDUCATION.

Other than the impetus given to physical education by the preparedness issue, the most interesting recent aspects of physical education are the broader and more philosophic conception of the scope and problems of physical education and the demand for standards by which progress and attainment in this field may be judged with some degree of scientific verity.

The former of these tendencies is apparent on all sides. Concretely it is manifested in the rapidly growing practice of expanding the functions of the director of physical training or establishing a new office to cover all or most of the phases of educational hygiene. Boston, with its department of school hygiene, covers the entire field.

New York, with its bureau of educational hygiene, covers every phase of the work except "medical inspection." Kansas City, Cincinnati, and other cities within the past two years have established such departments and have consolidated the previously scattered activities. This creates a demand for a new type of school officer, a director of health activities, whose equipment includes the essentials of both the medical curriculum and the physical training curriculum. Comparison of a program of the American Physical Educational Society of a decade ago with the program of the association of the current year shows significant progress in this respect. A report now being compiled by the bureau, based upon a nation-wide investigation of actual conditions as to physical education, shows strikingly this broadening scope and purpose. The integration of athletics and the teaching of hygiene with physical training is shown to be complete in many school systems; and even more complete consolidation, as indicated above, is found in not a few instances.

The tendency toward the establishment of standards is also manifested widely. The following examples, probably the most important, are at least typical manifestations:

(1) *Minimum Essentials of Physical Education*.—Prof. L. A. Rapeer, of Pennsylvania State College, has been delegated by the national committee on economy of time in education to report in February, 1917, on "The minimum essentials of physical education," to be published in the sixteenth report of the National Society for the Study of Education. Cooperating committees have been appointed from several national organizations: American Physical Education Association, National School Hygiene Association, Child Hygiene Division of the National Education Association, New Jersey Association of Medical Inspectors and Nurses, and others.

(2) *Baldwin's Measuring Scale for Physical Growth and Physiological Age*.—In this study¹ Dr. Baldwin has attempted to formulate tangible norms which may be used by physical directors and teachers as standards for comparison with all types and races of children between the ages of 5½ and 18 years. The norms are based on the best available data in this country from the Horace Mann School, the Francis W. Parker School, and the University, Elementary and High Schools of the University of Chicago, where a limited number of American children were measured consecutively for several years by trained anthropometrists using standardized apparatus of minute units with the age recorded exactly in days.

On the basis of these data Dr. Baldwin has formulated norms for physical growth in height, weight, and lung capacity. These are in the form of cards which may be used as a measuring scale for physical growth and stages of physiological maturity, as well as for records concerning physical conditions.

(3) *Efficiency Methods for Posture*.—The efficiency methods for posture worked out in Brooklyn several years ago and now used throughout New York City afford, through a triple test which all class teachers conduct, a standard of measurement for judging attainment and progress in this phase of physical development.

¹ Bird T. Baldwin in Fifteenth Yearbook of the National Society for the Study of Education. Cf. Bull. (U. S. Bu. Ed.), 1914, No. 10.

Once each month each class in the New York City schools is given a so-called triple test for posture; the class is grouped on this basis, and a percentage record kept of the number passing the test.¹

The same spirit and purpose, though less concretely worked out, is characteristic throughout the new course of study in hygiene of the New York City schools.

Another very interesting example is a plan by which the pupil keeps his individual hygiene record, worked out by Mr. E. F. Brown, of the child-welfare division of the New York Society for Improving the Condition of the Poor.

SOCIAL HYGIENE.

The relation of social hygiene to national efficiency is too obvious for comment. The manner and the extent of the contribution of the school to the unraveling of the knotty problems blanketed under this somewhat euphemistic title is far from solution. The issues are not clear and attitudes are determined in general more by temperament and preconception than by detached consideration of facts. This is equally true of those who oppose and those who favor action by the schools. The indefiniteness of the situation is illustrated in the following rather wistful expressions of two of the foremost advocates of sex education, Mrs. Ella Flagg Young and Dean Balliet, respectively:

Thus far, however, no construction of the meaning of religious instruction obliges the secular free schools to limit their instruction to a commercial, a utilitarian view of life; and no construction of sectarian or religious instruction forbids the common schools to teach so *that the boys and girls shall impress on their minds and engrave in their hearts the truth that purity in life and thought is the first essential in achieving dominion over one's self.*

The necessity for the right kind of sex education is generally admitted. It can not be safely left to the parent or church, as both have failed in the past, and many parents will always be incompetent to give it. The school, in some way not yet clearly devised, must ultimately do its share. Neither personal nor religious prejudices must be allowed to stand in the way of it. It is a problem for educators to study. Such education must be made essentially a part of the instruction in hygiene and in ethics. Its motive, to be clearly impressed upon the pupil at every point, is the preservation of health and right moral living.

One thing, however, is certain, and that is the moral imperative that teachers themselves should be sanely alive to the problems of social hygiene. Class instruction may or may not be sanctioned tomorrow, but the understanding of sex both in its individual and in its social significance is essential to the teacher who expects to deal understandingly and adequately with adolescents. The publications

¹For complete treatment of the subject see Bancroft's "The Posture of School, with its Home Hygiene, and new Efficiency Methods for School Training." (Macmillan.)

of the American Social Hygiene Association, especially the Monthly Bulletin, are invaluable. The bulletin is an epitome of information relative to legal and administrative phases of the subject and a mirror of the changes of attitude of society toward the problems involved.

Intelligent and effective work in this critical field of social educational service has been carried on for five years by the Oregon Social Hygiene Society.¹ Generous cooperation has been secured from "schools, churches, newsdealers, newspapers, railroads, theater owners, druggists, boards of health, teachers, business houses, legislatures, city officers, police and district attorneys." The State legislature has enacted effective legislation.

EYE HYGIENE.

Commerce and industry, as well as medicine and education, have shown keen interest in the conservation of vision and in promoting scientific study of its problems. The most recent of these contributions are summarized below:

(1) *Committee on Conservation of Vision of the American Medical Association.*—This committee was instituted in 1913. Its purpose is systematically to spread information in regard to eye hygiene and to stimulate and promote necessary legislation for the conservation of vision. During 1914 and 1915 it provided 829 lectures to audiences aggregating 183,223 people; it caused to be written 20 pamphlets on eye subjects, with a distribution of 34,000; it supplied the press bulletin of the American Medical Association with short, practical articles on eye subjects that have reached hundreds of thousands of people; it aided the campaign against "shop accidents" by its pamphlets, lectures, etc., warning the public against such accidents, and how they can be best prevented. The committee has been especially active in promoting legislation for eye, ear, nose, and throat examinations of school children. Seventeen States now have such laws. Inasmuch as the enactments have taken place in 10 of the 17 States since 1913, it is fair to assume that the passage of these laws was inspired by the existence of the committee.

An excellent summary of the laws of these 17 States has been prepared by Dr. Allport,² the chairman of the committee. The Wyoming law, passed in 1915, is "particularly praiseworthy for its brevity, plainness, and unambiguous language."

The committee urges strongly that teachers should make the preliminary examinations to ascertain the presence of defects, not to attempt diagnosis. A testing chart, modified from the familiar Snellen chart, has been carefully worked out. This is accompanied by instructions for the examinations of children's eyes, ears, etc., presented in clear, concise, and nontechnical form.³ It is stated by the committee that "by setting aside a day for this work and by having each teacher examine the children in her room, every child in any city of any size

¹ Foster: State-wide Education in Social Hygiene. *Social Hygiene*, vol. 11, No. 3, July, 1916. A brief but complete statement of purposes, methods, and results. Reprints may be had from the American Social Hygiene Association, 105 West Fortieth Street, New York.

² Published in *Ophthalmology*, July, 1915.

³ The "Vision Chart," with instructions attached, may be had from Hardy & Co., 10 S. Wabash Avenue, Chicago, Ill., at 7 cents each for 10 to 100; 5 cents, 100 to 500; 4 cents, more than 500.

can be examined in one day. By properly systematizing the work a child can be examined in five minutes."

Objections to examination by teachers are met in the following statement:

The objection has been raised that inasmuch as teachers have had no medical education, they are not competent to make these tests. A mere reading of the "facts" a teacher has to ascertain will show that no medical education is necessary to ascertain the "facts." Any one who knows enough to be a teacher can surely learn whether the child has red eyes, is cross-eyed, has frequent headaches, what lines can be read on the vision chart, whether the child is a mouth-breather, has pus discharging from its ear, etc.

(2) *Eye Hygiene in the Schools.*—The report of the committee of the American School Hygiene Association in 1911 covered both textbooks and instructional procedure. "Reasonable minima" in the making of textbooks were laid down, and these have been adopted by a number of textbook publications.

The investigations of the committee of the British Association for the Advancement of Science, as set forth in the most recent report, dispose of the question of glare or gloss.

Experiments conducted to obtain an objective measurement of the gloss of paper showed that glossiness depends chiefly on specular reflection—reflection as from polished metals—which is liable to interfere with binocular vision. The ideal surface for books would exhibit no specular reflection; all the reflected light would be scattered or diffuse reflection, equal in all directions and independent of the direction of the incident beam. In practice it is found that when the specular reflection does not exceed the diffuse reflection when the light is incident at 45°, the paper is satisfactory; when the specular reaches 56 per cent and the diffuse only 44 per cent, then there will be injurious glare, especially by artificial light.

(3) *Illuminating Engineering Society.*—The society maintains a committee on school lighting, of which Mr. M. Luckiesh¹ is chairman. The objects of the committee are investigation of problems of school lighting and propaganda both for improved practices by engineers and for necessary legislation. Within the past year this committee has submitted to its fellow committee on lighting legislation a report covering the essential features that should be incorporated in legislative codes.

(4) *Investigations by Mr. F. L. Godinez.*—In 1910 Mr. F. Laurent Godinez, of Jersey City, was employed by "several hundred representative architects who desired an authoritative expression upon the entire subject of artificial school lighting and who were prepared to defray the expense of investigation," to make an investigation of this problem, or, rather, group of problems. The investigations carried on by Mr. Godinez "have extended through five years and have involved an exhaustive consideration of over 4,000 individual problems related exclusively to schoolroom lighting." The results are unpublished, as they are the property of the architects who financed the investigation and are solely for their files. A summary of results and conclusions was presented at the second annual meeting of the New Jersey State Association of Medical Inspectors and School Nurses, Newark, N. J., May 20, 1916.²

¹ Mr. Luckiesh is director of the Nela Research Laboratory, maintained by National Lamp Works of the General Electric Co., at Nela Park, Cleveland, Ohio. This laboratory is equipped for the adequate investigation of all problems of illumination.

² Acknowledgment is made to the author and to the association for use of this unpublished paper. The proceedings of this meeting are in press.

The conservation of vision, in spite of all the progress that has been made in the 50 years since Cohn opened up the problem, is still one of the most serious of the problems of educational hygiene. Increasing mastery of the artificial production of light has involved new and difficult problems. In view of the complicated character of these problems and of their practical significance, it would seem desirable and practicable that there should be joint action on the part of the various bodies and individuals that are now carrying on their very commendable activities independently. It ought to be possible to form such a committee made up of competent working members representing the American Medical Association, the National Education Association, the American School Hygiene Association, the Illuminating Engineering Society, and any other scientific or professional bodies that have anything to contribute. Possibly the group of architects who promoted Mr. Godinez's investigations would be willing to contribute the detailed results of his investigations. Accepted facts should be classified and clearly and cogently set forth. Doubtful matters should be set forth with equal clearness and cogency but without controversial heat. Necessary lines of investigation should be clearly marked out and means should be devised for conducting such investigations systematically and without crossing of wires. Cooperation with the Bureau of Education should be secured in the interest of publication and adequate dissemination of results.

VENTILATION.

Ventilation is still an unsolved problem. Much progress, however, has been made from the naïve acceptance of carbon dioxide as the deleterious agency in bad air to the present careful, thorough, and systematic study of the constitution and effects of air under various controlled conditions. The investigations of physiologists have almost the fascination of a romance. Excess of CO_2 , defect of oxygen, presence of organic toxins, have been weighed and found wanting as the causes of the badness of confined air. The exhaustive researches of the New York State commission on ventilation, when completed, should clear up many of the disputed points. Until that authoritative report is issued the following may be accepted as a practical standard for inside air:

Good air is cool air, not over 68° F.; it is moist air with at least 50 per cent relative humidity; it is air in motion, free from dust, bacteria, and odors. The chief problems (in ventilation) are the maintaining at the normal level the body temperature, the elimination of dust as the vehicle of bacteria, and the keeping up of the indoor humidity somewhere near the outdoor humidity.

The following statement of the work of the New York commission has been furnished by Mr. G. T. Palmer, chief of the investigating staff of the commission:

The New York State commission on ventilation was appointed by the governor in June, 1913, at the request of the New York Association for Improving the Condition of the Poor. It was given by the association a fund of \$50,000 for its work, this fund being part of a large sum given by Mrs. Elizabeth Milbank Anderson, of New York City, for various phases of constructive social investigation. The fund for the ventilation work was later increased to \$75,000.

The purpose of this movement was to increase the general knowledge on the subject of building ventilation.

The fields of science believed to be most vitally concerned in this question included public health and sanitation, physiology, medicine, ventilating, engineering, chemistry, and psychology. The members of this commission selected, with this broad program in mind, and who serve without pay, are: Prof. C. E. A. Winslow, Prof. Frederic S. Lee, Dr. James Alexander Miller, Mr. D. D. Kimball, Prof. Earle B. Phelps, Prof. E. L. Thorndike.

Following its organization the commission first undertook the construction of an experimental chamber at the College of the City of New York, where the trustees of this institution generously provided the necessary space. It was desired to reproduce in this chamber any indoor atmosphere which might be met with in practice and hence be able to study the behavior of people exposed for varying periods to a known air condition. The chamber itself consisted of a small room, adequate for from four to eight people, which was elaborately fitted with devices for producing and maintaining heat, cold, dryness, moisture, freshness, draftiness, stagnation, and odor. With this equipment it was possible not only to reproduce air conditions found in various types of environments, but it was also possible to go further and produce the extremes of these conditions, to isolate each factor by itself and study its effects while keeping constant the other factors.

Here during the past three years experimentation has been in progress almost continuously, from 200 to 300 different people, young and middle-aged, male and female, students, stenographers, clerks, truck drivers, boiler makers, people of various occupations, those whose work keep them in the open air, in hot dry atmospheres, in hot moist atmospheres, have at some time for varying periods been under observation.

To extend the knowledge thus obtained and to verify it on a more practical scale, the commission has, through the cooperation of the boards of education and health of the City of New York, as well as similar bodies in other places, carried on its work in schoolrooms and school buildings. Two full-size schoolrooms in particular were equipped somewhat after the fashion of the experiment chamber at the city college permitting the observation of different ventilating methods within the same room and on the same group of pupils and over a period of several months. Exhaustive psychological and physiological tests have been utilized here likewise in an effort to measure accurately the manifestations of different atmospheric effects.

In addition to this work with school classes, intensive surveys have been made of the condition of schoolroom air under different methods of ventilation. Observers of the commission's staff have spent their entire time within the schoolroom during the school session for two weeks continuously and have conducted these biweekly surveys in the same school at different seasons of the year—fall, winter, and spring. It has been the feeling that much is to be gained in careful detailed work of this character which can not be obtained by inspections at random.

The commission has been in existence for three years and expects to complete its work and issue its final report the latter part of 1917. Progress reports and

descriptions of special phases of the work have been issued from time to time, appearing in the journals of the various scientific societies.¹

HYGIENE OF RURAL SCHOOLS.

As pointed out in the chapter on educational hygiene last year, the importance of health work in the rural schools is receiving increasing attention. A number of careful surveys of rural-school conditions, covering entire counties or smaller territorial units, have been made during the past year.

1. *Surveys by United States Public Health Service.*—In a recent address Dr. Taliaferro Clark,² of the Public Health Service, gives the most recent data and conclusions relative to health work in the rural schools. He shows that the physical care of school children demands serious attention in every community. Intensive studies of rural-school conditions conducted by the Public Health Service, he declares, have revealed a special need of health supervision of rural-school children because (1) they constitute 60.7 per cent of the total school enrollment of the country; (2) they are largely denied medical attention by specialists, such as may be had in hospitals and clinics in cities; (3) they can not be protected en masse by health laws as in urban communities.

Dr. Clark points out the need for the establishment of an efficient system of health supervision.

Unfortunately, only a small part of the rural school population of the country enjoys the benefits of such supervision. For example, in States where the laws are mandatory for the medical inspection of rural schools only 39.8 per cent of the total school enrollment is in rural districts; where they are permissive, 60 per cent; and where inspection laws do not apply, 61.4 per cent.

There are several reasons for this state of affairs: (a) The lack of a proper appreciation of such measures in rural communities; (b) the scarcity of persons in rural districts who are properly qualified for this service; (c) the financial inability of a number of rural communities to maintain an independent medical inspection service.

The following practical means of meeting these conditions are suggested:

The interest of rural communities in the matter of medical inspection can best be secured through intensive school surveys. By calling attention to unsuspected physical defects in their children and to school conditions requiring

¹ Several of the reports of experiments with school children have been reported from time to time in *School and Society*. The most recent reports describe an interesting series of experiments undertaken to ascertain the relative effects of outside air and "recirculated" washed air upon the intellectual efforts and progress of school pupils. The experiments were made upon 88 pupils, who were carefully tested regarding their mental capacity and proficiency in arithmetic and English by six tests of from 10 to 30 minutes' length. The results showed that the ability or readiness of pupils to learn did not seem to be appreciably impaired because of their working in a room ventilated by recirculated air, though unpleasant odors were often noted.

² Before joint meetings of American School Hygiene Association and Division of Child Hygiene, New York, July 8, 1916. See also *Public Health Bulletin* 77, June, 1916, "Rural School Sanitation."

attention, the necessity of some form of health supervision is brought home to parents. We have had practical experience of the educational value of such investigations through reports of an increased number of children seeking relief following surveys of this character.

The medical inspection of schools in rural districts is accompanied by a serious handicap, due to the impossibility, under existing conditions, of securing the services of a person properly qualified for this position. The appointment of a local practitioner is, as a rule, barren of results. He is unable to devote his whole time to this work, while the jealousy and quiet opposition of other local practitioners frequently render his efforts nugatory.

The requirements of a medical inspector are: (1) He should devote his whole time to this service and not engage in private practice or other calling that would interfere with the proper discharge of the duties of this position; (2) he should be skilled in medical diagnosis, able to refract children for glasses when necessary, and qualified to advise with and assist the family physician when it is so desired; (3) he should have a thorough understanding of the principles of hygiene and the ability to apply them to school purposes.

In addition to this handicap is the fact that the restricted financial resources of most rural communities precludes the offering of a salary commensurate with the attainments of a desirable school inspector. This difficulty can be overcome, in great measure, by combining the duties of the school physician with those of the district, county, or local health officer, with a salary equivalent to the combined salaries of the two positions. This would enable these communities to secure the full-time services of a trained sanitarian for health work and school inspection.¹

Two changes in school administration are urged as essential conditions to the establishment of efficient health work in rural schools: The establishment of the county unit of administration and the consolidation of rural schools. The former would be a positive step towards the employment of a full-time school and community health officer. The latter reform would mean larger buildings with improved sanitation. The concentration of pupils would render supervision both more thorough and more economical.²

2. *The school nurse in the rural school.*—In the chapter last year the school work of the town and county nursing service of the American Red Cross was referred to briefly. In spite of the heavy de-

¹ In New York it is the intention of the law that the trustees of a school district shall employ for school medical inspection the health officer of the town in which the district is located. This is not obligatory. The trustees may employ another physician in their discretion.

² An interesting development in connection with consolidation is the use of auto-vans, heated by the exhaust, for transporting children. Such a van used in Auntaulaunee Township, Berks County, Pa., is unique in that it seats 45 to 50 pupils. It has a double seat facing the two sides of the van running down through the middle. It makes the trip from the farthest home to the school in a half hour, makes two trips a day, never varies more than 5 minutes from the schedule, and has missed only two days during the entire school year. The directors say the \$3,000 paid for it was earned during the year. All who see it consider it far more sanitary than the horse-driven vehicles which take much longer time to get to school and are not so well heated.

mands made by the war upon the resources of the Red Cross, this constructive work in the department of civilian relief has been maintained and extended. During the past year Red Cross visiting nurses have been employed in 19 different States. There has been an increase in the number of training centers for the preparation of public-health nurses. The State University of Ohio is to cooperate with the local visiting nurse association in Columbus in offering a course in the fall of 1916. The University of Cincinnati is also to offer such opportunity. Washington University, in St. Louis, will probably make a beginning in 1916, as will also the State University of Iowa, and possibly some other State universities of the Middle West.

Some of the more important examples of methods and results of the rural nursing work follow:

In Livingston County, Ill., the nurse is employed by the county antituberculosis association. In this county data relative to the health of the rural school children have been compiled and correlated with grade, age, attendance, and consequent cost to the county. The visiting nurse holds classes in home nursing in the high schools of two districts. In one of these the course is compulsory.

In Kent County, Mich., the county commissioners and the county antituberculosis society share the expense. This includes the cost and maintenance of an automobile.

In the report for 1915 an account is given of the organization and activities of the hygienic league, the object of which is the cultivation of interest in the prevention of disease and in clean personal habits and the spread of general health knowledge among the school children. The plans have been worked out with care and foresight. The incentive to become a member of the league is found "in the ambition of the child not to be outdone in the improvement of personal appearance as well as in personal health." Membership is granted upon evidence of standardized improvement, and is visibly signified by an attractive badge.

Near the end of the school year in 1916 a dental clinic for rural children was held for two weeks (12 half days) in Grand Rapids. A dentist was employed and the children were brought by the nurse from the outlying districts.

The University of Tennessee has launched a new plan in the employment of a public health nurse as a special home demonstration agent in the extension department of the institution. The nurse is emphasizing in her talks constructive hygiene in the home, school, and public meeting place. She prepares material on health subjects for the use of county agents. She has just prepared a bulletin on "Talks to girls on health," to be sent to the girls in the canning clubs of the State.

The mayor of Jerome, Ariz., a small mining town where a Red Cross visiting nurse has been employed, writes:

Miss Kraft's work has resulted in wonderful improvement in health and sanitary conditions. The death rate is reduced, and we have not had occasion to spend a lot of money in quarantine guards in the endeavor to control outbreaks of contagious diseases, which has been the heaviest expense of the health department in past years.

During the past year county nursing has been initiated in North Dakota, Virginia, and several other States. The Illinois Legislature enacted a law (Glacken law) for the encouragement of county nursing.

MISCELLANEOUS.

Of the subjects treated at length last year, cooperation in administration, schoolhouse sanitation, medical inspection, and hygiene of the rural schools, only one, the last, receives extended notice this year. The exhaustive investigations by the public health service of rural school conditions and the work of the town and country nursing service of the Red Cross in the rural schools are so important and suggestive that they could not properly be passed over with a word.

Cooperation in health work is developing into coordination. Dr. Stiles, of the United States Public Health Service, makes the sane suggestion that the health officer in every jurisdiction should be ex-officio a member of the corresponding board of education; vice versa, the school superintendent a member of the health board.

There has been no important legislation relative to schoolhouse sanitation in the past year. In the sections of this chapter on ventilation and eye hygiene, certain aspects of sanitary construction and equipment are touched upon.

The standard sanitary requirements for schools, worked out by Dr. Cornell, director of school medical inspection in Philadelphia, fill a well-recognized need. These standards were purposely "made so low that they can not be criticized as impractical and ideal." They have been in operation for about five years and have proved their usefulness. They should serve as points of departure at least for school systems that desire efficient sanitary inspection and control of school buildings.¹

¹ See Reports of Division of Medical Inspection of Schools, Department of Health and Charities, for years 1914 and 1915.

Table of standard figures used in grading nine important sanitary items in schoolhouses.

Item.	Method of calculation.	Grades.				
		Excellent.	Good.	Fair.	Poor.	Bad.
Ventilation.....	Cubic feet air space per child..... <i>Proportion of proper supply.</i>	200 or more. <i>Standard.</i>	199.9-175. <i>Standard-$\frac{1}{2}$.</i>	174.9-150. <i>Standard-$\frac{1}{2}$.</i>	149.9-133.3. <i>Standard-$\frac{1}{2}$.</i>	133.2 or less. <i>Standard-$\frac{1}{2}$.</i>
Illumination.....	Relation of window area to floor area..... <i>Proportion of proper supply.</i>	.20 or more. <i>Standard.</i>	.1999-.1967. <i>Standard-$\frac{1}{10}$.</i>	.1699-.1250. <i>Standard-$\frac{1}{10}$.</i>	.1249-.1111. <i>Standard-$\frac{1}{10}$.</i>	.1110 or less. <i>Standard-$\frac{1}{10}$.</i>
Desk provision.....	Square feet floor space per desk..... <i>Proportion of proper supply.</i>	.15 or more. <i>Standard.</i>	14.99-13.13. <i>Standard-$\frac{1}{10}$.</i>	13.12-11.25. <i>Standard-$\frac{1}{10}$.</i>	11.24-10.0. <i>Standard-$\frac{1}{10}$.</i>	9.99 or less. <i>Standard-$\frac{1}{10}$.</i>
Boys' toilets (seats).....	Boys per seat..... <i>Proportion of proper supply.</i>	40 or less. <i>Standard.</i>	40.01-36. <i>Standard-$\frac{1}{10}$.</i>	60.01-120. <i>Standard-$\frac{1}{10}$.</i>	120.01-160. <i>Standard-$\frac{1}{10}$.</i>	160.01 or more. <i>Standard-$\frac{1}{10}$.</i>
Boys' toilets (common wall urinal).....	Boys per inch wall space..... <i>Proportion of proper supply.</i>	1.25 or less. <i>Standard.</i>	1.251-1.875. <i>Standard-$\frac{1}{10}$.</i>	1.876-3.75. <i>Standard-$\frac{1}{10}$.</i>	3.751-5.0. <i>Standard-$\frac{1}{10}$.</i>	5.001 or more. <i>Standard-$\frac{1}{10}$.</i>
Boys' toilets (individual urinals).....	Boys per individual urinal..... <i>Proportion of proper supply.</i>	.24 or less. <i>Standard.</i>	24.01-36. <i>Standard-$\frac{1}{10}$.</i>	36.01-48. <i>Standard-$\frac{1}{10}$.</i>	48.01-60. <i>Standard-$\frac{1}{10}$.</i>	60.01 or more. <i>Standard-$\frac{1}{10}$.</i>
Girls' toilets.....	Girls per seat..... <i>Proportion of proper supply.</i>	.24 or less. <i>Standard.</i>	24.01-36. <i>Standard-$\frac{1}{10}$.</i>	36.01-48. <i>Standard-$\frac{1}{10}$.</i>	48.01-60. <i>Standard-$\frac{1}{10}$.</i>	60.01 or more. <i>Standard-$\frac{1}{10}$.</i>
Yard area.....	Square feet per pupil..... <i>Proportion of proper supply.</i>	36 or more. <i>Standard.</i>	35.99-24. <i>Standard-$\frac{1}{10}$.</i>	23.99-12. <i>Standard-$\frac{1}{10}$.</i>	11.99-9. <i>Standard-$\frac{1}{10}$.</i>	8.99 or less. <i>Standard-$\frac{1}{10}$.</i>
Drinking water facilities.....	Pupils per faucet..... <i>Proportion of proper supply.</i>	.50 or less. <i>Standard.</i>	50.01-75. <i>Standard-$\frac{1}{10}$.</i>	75.01-150. <i>Standard-$\frac{1}{10}$.</i>	150.01-200. <i>Standard-$\frac{1}{10}$.</i>	200.01 or more. <i>Standard-$\frac{1}{10}$.</i>

NATIONAL COUNCIL OF EDUCATION.

The committee on hygiene of the National Council of Education in its annual report projects the following program of health work in the field of education:

I. Experiments in and demonstration of improved health work in the schools (particularly in the rural schools), to which our committee has given special study and attention. Proposals for such experiments and demonstrations (particularly for improved health of rural school children) have received cordial approval from leaders in the fields of public health, education, and social service.

II. A comprehensive and authoritative study of physical conditions and characteristics of children for the purpose of establishing physical norms of child development. Such standards would improve greatly the value and efficiency of health examinations and health supervision of children generally. All those who are engaged in work for children agree in indorsing a study and report of this kind.

III. A national investigation of the health and general welfare of teachers. The present study of health and welfare of teachers in New York State points convincingly to the need of a national study in this field.

IV. A thorough investigation of the health effects of athletic games upon school pupils of various ages and of both sexes. Such an investigation is recognized as of great present importance by leaders in the medical field as well as by educators.

V. A study and report on health teaching and training in the schools. Health teaching is in a period of rapid and significant transition. An investigation of the work of the schools brings to light many valuable efforts in this field. A report in the near future which might authoritatively support the principles of sound health teaching and make conveniently available information regarding some of the best efforts in this field would provide a valuable document for the guidance of teachers.

CHAPTER XX.

EDUCATION OF IMMIGRANTS.

By H. H. WHEATON,

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I. GENERAL.

In 1914, when the Bureau of Education began a national investigation of facilities for the education of aliens, chaos existed in this important phase of education. Few established and well-approved standards existed, and practically all methods were in the experimental stage. Policies, except that of Federal noninterference, were known only to cities and States where evening schools for immigrants had been long maintained. Public agencies of various kinds were endeavoring to treat the problem each in its own way, without definite endeavor to cooperate with other agencies, and with no fixed policies. Immigrant education was considered at this time primarily a matter for local attention and jurisdiction. The spectacle of cities working out methods independently and adopting fads in immigrant education without the coordinating influence of even a clearing house of information was so common as hardly to excite comment. State supervision, and especially State aid, had not at this time been seriously considered. Only one State, New Jersey, had specified financial aid for the encouragement of immigrant classes. Only one other State, Massachusetts, had legislative provisions requiring the school attendance of illiterates up to 21 years of age. Federal interest was considered in some quarters both inopportune and improper. Establishment and maintenance of educational facilities had, by established precedent, and constitutional and legislative provisions, been left primarily to State governments and municipal and district school jurisdictions. The same policy was applied to the education of immigrants. Such Federal interest as existed derived its impetus largely from the national attempt to remove illiteracy, since the foreign-born whites contributed in large numbers to the body of illiterates. The establishment of fundamental principles and policies in the education of immigrants was, so far as the Federal Government was concerned, agitated chiefly

by reformers and social workers who came into more direct contact with the problem than governmental officials.

In contrast to State and Federal agencies, numerous private agencies and organizations—city, State, and National; civic, patriotic, and educational—were exploiting the field of immigrant education extensively. Frequently this was due to ulterior motives, among which may be cited the desire to secure financial support. Owing to the general, and, in some cases, unintelligent public interest in the immigrant, appealing instances of his condition were described for the purpose of securing contributions. Again, the creation and maintenance of English and civics classes were utilized as a means of building up the schools of private agencies, many of which, if investigated, would not have received full public sanction. The efforts of some private agencies, furthermore, were well meaning, but directed through the wrong channels. Types of educational facilities and instruction were provided wholly unsuited to the immigrant type, need, and condition, with the result that immigrant men and women were induced to attend classes of no practical value either to them in their life in America or to the country as an Americanizing influence. While the activities of the various private agencies so far mentioned were excusable, their general intentions being good, the exploitation of immigrants by political organizations and fellow countrymen, who maintained classes of instruction either for the purpose of securing excessive fees or for the purpose of making partisans politically of the immigrants who were being trained, was peculiarly harmful and a common occurrence. In several States, particularly California, through the investigation of the Commission of Immigration and Housing, instances were found where immigrants paid from \$25 to \$50 for a two weeks' course in English and civil government that they might be equipped to pass their naturalization examinations. So-called political clubs were formed in many localities by foreign-born citizens, who were hirelings of petty political leaders, and who, under the guise of giving civic training, promoted the interests of such politicians or of some political party.

LACK OF COOPERATION.

Further accentuating the chaos existing in immigrant education, public agencies failed to cooperate among themselves or to call for the cooperation of private organizations, while, on the other hand, private organizations not only failed to cooperate among themselves, but actually competed with public agencies in providing facilities and instruction for immigrant residents. This lack of mutual assistance had three results: First, decentralization of all educational work among immigrants; second, a positive diminution of public

activity; and, third, rivalry among private agencies both to secure the bulk of financial support and to build up powerful organizations. Such were the conditions in immigrant education which confronted school officials and social workers at the beginning of the national investigation by the bureau in 1914.

PROGRESS SINCE 1914.

Progress in every way has been rapid, definite, and extensive. Governmental authorities everywhere, city, State, and Federal, have expressed serious interest in the problem, and have taken definite steps to provide adequate facilities. Municipalities have seen that the education of the immigrant, especially through the provision of evening classes, is to be treated as a fundamental part of the educational system, rather than as an incident or adjunct to the day-school system to be maintained or not at will, or according to the amount of money in the school treasury. Many of the States, such as California, Michigan, and New York, and particularly the State departments of education, have come to appreciate the fact that the immigrant is not merely a local problem. The transitory nature of his employment, and hence residence, have been increasingly appreciated in their bearing upon his education. While the primary obligation of the city has been acknowledged, both officials and citizens have grown to see that the secondary obligation of the State to assist the city and the local school district in this particular type of education is one of such imperative nature as to demand financial assistance and State supervision and coordination of activities. The Federal Government, especially the Bureau of Education, as a result of an investigation of facilities, has come to take the stand that inasmuch as admission of an immigrant to the United States, together with his admission to citizenship, are both Federal matters, then, equally, is interest in his training for life and citizenship in this country a Federal matter. With immigrants moving from city to city and from State to State, with different nationalities in each State, and with the necessity of a clearing-house of information becoming more and more apparent, this Federal interest has been increasingly directed toward the establishment of fundamental principles, policies, and standards, together with approved practices in this form of education.

On the other hand, private agencies have seen the futility of competition among themselves and with public agencies and institutions. Hence they have increasingly adopted the practice of establishing facilities only where they do not exist, or where public facilities can not, for financial reasons, be made to meet the local problem. The practice has become more and more established of placing private facilities under the supervision of appropriate public school officials,

and of turning over to the latter such facilities as rapidly as financial and other reasons will permit. The result is to-day that, while conditions are far from satisfactory, the evolution of education has forced a larger measure of cooperation on the part of all agencies and individuals interested in the training of immigrants for citizenship in America. Although this is the transition period, yet principles, policies, standards, and methods are now more clearly delineated than ever before, while the most effective procedure of all—cooperation—is daily teaching those interested its potency in the Americanization movement.

II. CONSTITUTIONAL AND LEGAL STANDARDS.

Some of the standards virtually established by State constitutions are unfortunate. In effect, the provisions in many State constitutions operate against the establishment and extension of evening-school facilities, through which, primarily, the non-English-speaking foreigner must be reached. Such is the case in the States of Alabama, Arizona, Arkansas, Colorado, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Montana, Nebraska, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, and Wyoming. In these States the constitutions, in most instances, authorize the legislature to provide for establishment and organization of free schools only for children within the ages of 6 and 21 years. Some of these States restrict the division of State school funds so that only children 21 years of age or under are the beneficiaries. In only one constitution, that of California, are evening schools specifically mentioned by name, and their establishment authorized. While it is true that, under existing rules of legal construction, constitutional provisions in the other States enumerated do not prohibit legislatures appropriating money from general State funds for the support of evening schools and do not make impossible the maintenance of evening schools by local communities, yet the fact that State school moneys can not be used except for children below the ages of 18 or 21 years discourages legislatures from separate appropriation for evening-school purposes, and operates to discourage local communities from maintaining such facilities on their own financial responsibility without State aid.

EVENING-SCHOOL LEGISLATION.

Most legislative provisions applicable to evening schools are permissive in nature so far as establishment of evening schools by local communities is concerned. Massachusetts and Connecticut are exceptions to the rule. They require, under certain conditions, that evening schools must be maintained. In Massachusetts, every city or

town in which labor certificates are granted within the year to 20 or more persons to whom the literacy law applies must maintain an evening school during the following year. In Connecticut, every town having a population of 10,000 or more is required to establish and maintain such schools for the instruction of persons over 14 years of age. In other States, evening schools must be established by local communities, provided a stipulated number of residents present a formal petition. This is the case in Indiana, where night schools must be established in cities of over 3,000 inhabitants upon the petition of 20 or more inhabitants having children between the ages of 14 and 21 years, necessarily employed during the day, who will attend such evening schools. Practically the same requirement affects Baltimore County, Md., except that the petition must be signed by 20 persons over 12 years of age who desire to attend evening school. In Pennsylvania, the provision is mandatory in second, third, and fourth class school districts upon the application of 25 parents of pupils above the age of 14 years who are residents of the school district.

On the other hand, legislative provisions making the establishment of evening schools entirely optional on the part of local boards of education have been passed in several of the principal immigration States, such as California, New Jersey, New York, Ohio, and Wisconsin. In fact, this seems to be the standard adopted by most legislatures. The result is that evening-school facilities are not maintained in a large number of communities where a genuine demand and need exists. Even in those cities where facilities are established they are usually considered merely adjuncts to the day-school system, rather than an integral part of the educational system. Thus in the principal immigration States above specifically mentioned the number of communities maintaining evening schools is surprisingly low. In New York, with a foreign-born white population of 2,729,272, the largest in the entire country, a State having 148 urban centers with over 2,500 inhabitants, and 71 urban centers with over 1,000 foreign-born whites, the number of cities maintaining evening schools is only 41. In Pennsylvania, the number is slightly higher, 42, but is really lower when taken in connection with the fact that this State has 263 urban centers with 2,500 inhabitants and 127 such centers with 1,000 foreign-born whites. New Jersey has only 30 communities with evening schools, as against 61 urban centers with over 1,000 foreign-born whites; Ohio, 20 as against 40; California, 9 as against 30; Wisconsin, 19 as against 38. On the other hand, Massachusetts, owing to the operation of its mandatory evening-school law, has 65 communities with evening schools, as against 117 communities with over 1,000 foreign-born whites. In Connecticut, every city over 10,000, with the exception of one, a

wealthy suburban community which has no reason to comply with the State law, maintains evening schools pursuant to the mandatory provision above referred to. No State during the past two years has passed any legislation making the establishment of evening schools mandatory.

In commenting upon legislative standards, mention should be made of the fact that during the last year a method of securing the establishment of evening schools has come into common use although not required by law in any considerable number of States; namely, petition by immigrants desiring evening-school instruction in English and civics. The Bureau of Education is in receipt of a number of such petitions requesting it to use its influence with local boards of education in securing evening-school facilities. It was also advised of several instances where similar petitions have been made directly to local school authorities as a means of securing action by them. This suggests a very definite scheme of securing evening schools in States where these facilities are authorized by law, but are not required to be maintained. As interest in acquiring the common language of the country develops among the foreign-born whites, the tendency seems more and more to be in the direction of making formal petitions for instruction through evening schools. This is quite likely to be adopted by legislatures as a standard condition precedent to requiring evening schools, for the purpose of ascertaining the desire on the part of immigrant residents for training in English and civics.

A most significant law was passed by the California Legislature last year, setting a high standard for other States. This legislation provides for the appointment of "domestic educators" by local boards of education, upon the basis of one appointee to each 500 units of attendance in the day schools. These educators are to go from house to house, especially in the foreign sections, for the purpose of training the mothers and children in the rules of health, sanitation, and hygiene, the principles of buying food and clothing, the English language and civics, and other appropriate subjects. The Commission of Immigration and Housing of California, the Federation of Women's Clubs, and the Daughters of the American Revolution have united in developing facilities authorized by this new law.

STATE AID.

Eleven States grant State aid benefiting evening schools: California, Connecticut, Indiana, Maine, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island, Washington, and Wisconsin. The amount of State aid, together with the conditions under which it is granted, however, is not standardized in these States. Under

certain limitations, Pennsylvania, to promote vocational instruction, grants to a school district two-thirds of the sum which has been expended during the previous school year for such instruction. Evening schools for foreigners are thus indirectly benefited if vocational instruction is given therein. In Maine two-thirds of the amount expended for the salaries of teachers is allowed for evening schools in which certain vocational subjects are taught. One-half the cost of maintenance or of actual expenditure for evening-school instruction is the standard most frequently adopted. This practice obtains in New Jersey under a special law to promote immigrant classes, and in Rhode Island and Wisconsin under certain restrictions as to the total amount receivable by a community. Divers other methods of apportionment obtain in the remaining States, as in California, where it is based upon average daily attendance in evening schools; in Connecticut, where a fixed rate of \$2.25 per pupil in average attendance is paid; in Minnesota, where also obtains a per capita basis for evening-school pupils between the ages of 5 and 21 years; in New Jersey, where a fixed amount per teacher is paid, together with a per capita allowance based upon attendance; in New York, where the basis is the number of teachers and the days taught by each; and in Washington, where aid is given according to the actual number of units of attendance of all pupils. In the two States where aid is granted upon the basis of attendance an evening attended is credited as half a day provided the session is two hours in length.

It would seem, therefore, that some very high standards have been set in the apportionment of State aid, yet none of them has received such general adoption as to warrant the statement that it is an approved standard. While the principle of State aid for evening-school maintenance is firmly established, the conditions under which it is granted still need standardization.

STANDARDS IN ADMINISTRATION.

Supervision of evening schools ought to be as definite and as extensive as supervision of day schools. It is not upon a satisfactory basis in most communities. The general practice seems to be to leave supervision to the superintendent. Only about one-third of the 150 cities reporting during the last year employ a director of evening-school work. Many large communities report no such school official. Only one city, Rochester, N. Y., reports a director of immigrant education, whose duties are exclusively limited to this particular phase of education. It is needless to remark that this city has made rapid strides in its Americanization work, due largely to this specialized supervision. A very few other cities report the detailing of a principal to supervise the immigrant work in addition

to his other duties, but in these cities Americanization work has not progressed so extensively or along such definite lines. Detroit has announced for the coming year the appointment of a supervisor of immigrant education for the purpose of training teachers in methods, selecting appropriate courses and texts, coordinating the work of the various schools and classes, and working out appropriate entertainment on "social" evenings.

In the appointment of evening-school teachers it seems to be the general practice to select teachers most capable from the day-school staff. Superintendents who follow this method from choice do so feeling that a day-school teacher is most competent and has training in educational methods. Those who follow the practice from necessity, not being able to secure suitable teachers from other sources, do not approve of the practice, feeling that the double work, physically and mentally, placed upon teachers reduces the efficiency of both day and evening school instruction. Until adequate means of training teachers for the instruction of immigrants in English and civics are devised, coupled with increased salaries, it is quite likely that this custom will obtain generally.

Methods of appointing teachers are quite diverse. While the ideal method would be recommendation by the supervisor of immigrant education, after proper professional determination of fitness, nomination by the superintendent, and appointment by the board of education, yet local whim seems to have determined the particular method. Some communities report appointment by superintendents, others by boards of education, others by committees of the board of education, others by principals, others by directors of evening schools, others by supervisors of extension work, or by the board of industrial education.

The qualifications considered in the determination of fitness have gravitated toward the following tests, the order set forth indicating the commonness of the method: first, general teaching ability, training, and experience; second, known ability to teach immigrants; third, experience in teaching immigrants. Training in the teaching of immigrants has been given slight consideration, due to the fact that few cities have given definite training in this particular line of work. Knowledge and appreciation of the immigrant and sympathy with him and with his national and racial characteristics have not come to be regarded as important. Ability to speak the foreign language is a requirement in some places, and personality receives consideration in a number of cities, but no standard test or definition of personality prevails.

In training teachers of foreigners, some progress has been made during the past year. In Rochester, N. Y., a high standard has been established, the teachers being brought together in meetings fre-

quently, and training given them in their own classrooms by the supervisor of immigrant education. Small groups of teachers are taken about from school to school by the supervisor for the purpose of watching the work of the most competent instructors. Similar methods have been utilized in other cities, but the training is not so highly specialized. Several teachers' institutes have been held during the past year in order to develop an interest in this type of education and to point out some of the most effective methods utilized. Boston has conducted a teachers' training course over a considerable period of time. At the close of the school year a course was given in the city of Detroit, two specialists from outside of the city giving two lectures each day to about 300 persons. A similar course was given in Buffalo at the close of the evening-school term, while several courses have been given in teachers' colleges and even in universities where teachers were in attendance. The most notable of such courses were the ones given in the State Teachers' College at Albany, N. Y., and in the summer school of Columbia University. This particular method of training probably marks the beginning of great advance in the equipment and qualification of teachers for the type of instruction under consideration. Several other cities have also announced such courses for the coming school year. Special conferences and meetings of teachers have been held in Harris Teachers' College at St. Louis, Mo., Wilmerding, Pa., Rockford and East Chicago, Ill., Franklin, Mass., Hibbing, Minn., Garwood, N. J., Hudson Falls and Yonkers, N. Y., Milwaukee and Superior, Wis. About 35 cities report lectures on immigrant-education problems.

Lack of standards in training, of course, is due in part to lack of standard in methods of teaching English and civics. As progress is made in the latter direction, so equally will advance be made in competent training of teachers.

Salaries of both teachers and principals in the evening schools are generally paid upon the evening basis. Of 354 communities reporting upon the basis of payment, 271 pay at a fixed rate per evening; 41 at a fixed rate per hour or period; 31 on the monthly basis; 6 upon the yearly basis; and 5 upon the weekly basis. While payment upon the evening basis is the standard usually adopted, yet distinct advance has been made during the last year or two toward payment upon the monthly basis. The whole question of payment is involved in the schedule of hours and sessions. As long as teachers are taken from the day-school staff and evening schools are conducted on only three or four evenings per week, payment must by necessity in most cities be made upon the evening basis. Where evening schools are conducted four or five evenings per week, and where adult classes are also held during the day, the tendency is toward payment upon a monthly basis. The extension of evening-school facilities and the

combination of adult day classes with evening-school instruction will enable an increasingly large number of communities to make payment upon that basis. The professional side of instructing adult immigrants will never be developed until a teacher is placed in a position to specialize in this form of work to the exclusion of day-school instruction of children and other vocations. Principals are usually paid upon the same basis as teachers, although in 14 instances a different arrangement prevails.

Salaries of teachers and principals show the greatest diversity. The most frequent salary in cities of over 100,000 population is \$2 per evening. This obtains in 10 out of 36 cities reporting, although the range of salaries in these cities is \$1 to \$3, while the average is \$2.20 per evening. The most frequent salary in cities ranging from 25,000 to 100,000 population is also \$2 per evening, as well as in cities from 10,000 to 25,000. Twenty-five out of the 81 cities in the second-mentioned group and 26 cities out of 82 in the third group pay this amount. The range of salaries, however, in both of these last-mentioned groups is greater even than in the first mentioned, being from \$1 to \$3.50. The average in both, however, is below the first-mentioned group. The general tendency seems to be to raise the rate per evening as interest and appreciation of the Americanization movement develops in each community.

TERMS, SESSIONS, AND HOURS.

The greatest diversity exists in the number of evenings taught during the term. In Traverse City, Mich., the term runs through 20 sessions, one evening per week, while in Los Angeles and Oakland, Cal., the term extends throughout 187 sessions of five evenings per week. It must be remarked, however, that the length of the terms in the two California cities mentioned is due to the requirement of State law, it having been made a standard by legislative enactment that evening school facilities shall be coextensive with those provided in the day schools. In the 43 cities of over 100,000 inhabitants reporting, in which the range of sessions is from 46 to 187, the average number of sessions is 83. This, however, does not mean that the average is by any means a standard. Only 9 of these cities report over 90 sessions; 24 report from 70 to 90 sessions, and 10 less than 70. Again, of the 102 cities of 25,000 to 100,000 population reporting, with a range of sessions from 40 to 185, the average number of sessions is 79. In 22 the term runs over 90 sessions; in 59 from 60 to 90 sessions; and in 21, less than 60. Out of the 113 cities of 10,000 to 25,000 inhabitants reporting, with a range of sessions from 20 to 177, the average number of sessions is 59. Thirteen cities report over 80 sessions in a term; 78 report from 40 to 80; and 22 report less than 40.

State aid is the most powerful factor in standardizing the number of sessions in a term. In New Jersey, under the provision of the general aid law, a community may not receive State aid unless it maintains night schools on at least 64 evenings.* In Connecticut, the minimum is fixed at 75. In Minnesota, State aid is not available unless the pupils attend on 40 nights or more.

The number of sessions per week ranges from one to six. The standard seems to be three nights per week on alternate evenings. Of 376 cities reporting, 175 had three evenings per week, and 102 had four evenings per week. Monday is selected by 335 cities, and Monday, Wednesday, and Friday evenings constitute the most frequent combination in 86 cities, although classes are conducted on the first four evenings of the week in 80 cities. The tendency during the past year or two has been toward the first standard mentioned—three alternate evenings per week—Monday, Wednesday, and Friday. At the close of the last evening-school year, the school officials of Detroit announced that the four-evening combination would be abolished and a three-evening combination would be substituted during the coming school year.

The length of a session is unusually well standardized; 323 out of 428 cities reporting use a two-hour session. Nevertheless, 74 cities have sessions of one hour and a half. Although 122 cities use the 7 to 9 o'clock period, the most common hours of conducting classes are from 7.30 to 9.30. One hundred and forty-six communities have adopted this as a standard period.

REGULARIZING ATTENDANCE.

Although cities have used several methods of regularizing attendance of immigrant pupils, the most common practice is to require a deposit returnable upon regularity of attendance. At least 150 communities require deposits conditioned upon two-thirds to four-fifths of the evenings taught. The amount of the deposits varies widely. The most common amount required is \$1. Out of 429 cities 77 report an actual fee charged. This operates to discourage attendance rather than to regularize it.

PUBLICITY AND COOPERATION.

In bringing evening-school facilities to the attention of prospective pupils, the most common methods used by school authorities are announcements in the foreign-language newspapers, posters, placards, and handbills. In seven cities slides are shown in moving-picture theaters. In a few cities circular letters are sent to employers, labor organizations, foreigners' societies, and civic clubs.

The greatest contribution to publicity methods has been made by the city of Detroit, where the board of education and the board of commerce united in a city-wide publicity campaign to induce foreigners to attend night school. Several hundred industrial establishments cooperated in having their non-English speaking employees enroll. Posters and handbills were disseminated broadcast and notices were placed in pay envelopes. Priests, foreigners' societies, foreign-language newspapers, patriotic societies, civic clubs, and fraternal organizations cooperated in bringing the value of night schools to the attention of foreign-born residents. As a result enrollment was increased in excess of 150 per cent beyond the year preceding.

For the sake of stimulating an appreciation of the value of publicity as a means of getting foreigners into the night schools, the Bureau of Education caused the distribution of over 150,000 "America First" posters. These set forth in English and seven foreign languages the advantages of attending night school and learning the English language. The response was definite and conclusive. Not only was a perceptible increase in attendance noted, but a positive demand for night schools came from many sections where such facilities had never been maintained. A considerable number of communities established night schools as a result, and a keen interest in the Americanization movement was developed among American citizens.

Another method of publicity was devised by the United States Bureau of Naturalization in the Department of Labor. The names of declarants and petitioners for naturalization were entered upon cards and sent to the respective school authorities in those communities where these aliens resided. Through the contact developed in this way between naturalization courts and school officials a considerable number of classes in citizenship for those preparing for naturalization have been established.

In December, 1914, the Bureau of Education suggested to the United States Bureau of Immigration in the Department of Labor that the names of alien children of school age be sent to the proper school authorities in those communities to which such children were destined upon arriving at the ports of entry. The names of a limited number prior to that time had been sent to certain cities upon request. The plan was extended to all communities at the beginning of the school term of 1915-16. A great number of enthusiastic letters were received from superintendents setting forth the value of the plan in enabling them to locate newly arrived immigrant children before they become unlawfully employed.

Americanization through education has been denoted, in 1915-16, by greater tendency toward cooperation. Private agencies espe-

cially have shown more desire to unite with governmental authorities in dealing with the problem of immigrant education. Chambers of commerce, industrial establishments, patriotic societies, philanthropic organizations, newspapers, women's clubs, labor unions, and public-spirited citizens, alike, have put sincere endeavor into the Americanization movement. In many instances privately maintained schools have been transferred to the supervision of the constituted school authorities. This indicates a healthy tendency toward centralizing work for immigrants.

CHAPTER XXI.

EDUCATIONAL SURVEYS.¹

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INTRODUCTION.

A review of the activities during the year just closing reveals a more thorough establishment of "the survey" as a means of educational progress. Communities, large and small, are finding this, too, increasingly useful as a means of acquiring and disseminating information concerning the work of any given school system. The method of comparison necessarily involved in a survey also yields a ready perspective from which may be gained a more or less clear vision of the lines along which further progress or readjustment may be made. The number of surveys that have been completed and have been in progress during the period reaches a total of 76. This increase may safely be regarded as further evidence of growing satisfaction in the public mind with this recent method of "stock-taking" in educational activities.

The secure establishment of "the survey" as the proper means of inviting progress in any and all forms of educational affairs is unmistakably indicated by the increase in the number of responsible agencies which have accepted this most recent mode of approach to the problems involved in large and complex situations. The services of the Bureau of Education have been "freely placed at the disposal of any educational institution in the United States which might desire a survey of its work and organization." The bureau was the

¹ In the report of the Commissioner of Education for the year ended June 30, 1914 (Ch. XXIV, vol. 1, pp. 513-562), and June 30, 1915 (Ch. XVIII, vol. 1, pp. 433-492), appeared two reports of school surveys in the United States. The educational inquiries and surveys, the reports of which, with two exceptions, had been published up to the close of each of the two years respectively, were analyzed with reference to the place and time, the authorization, the details of the staff, the situation leading to the inquiry, the method and scope, and the fundamental problems investigated, with a summary of the more important findings and the recommendations.

This third report includes those surveys of which the reports have been published during the year under review or are in process of publication. Owing to the limitations of the present report the usual summary of the important findings and recommendations has been omitted. There is appended a list of those surveys the reports of which may not be published.

active agent in the first organized survey in 1911, and nearly one-third of the studies included in this chapter have been prepared by its representatives. The recent announcement of the General Education Board that it was prepared to enter upon survey activities adds the worth of the collective judgment of this large foundation to the growing value of the survey. Thus, to individuals and the temporary commissions created by local authority, the first five years of the movement have witnessed the addition of departments of government, National and State, public and private universities, and great private foundations as surveying agents.

The year under review is characterized chiefly by the wider adoption of the social point of view in judging educational aims, activities, and results. It would seem that, inasmuch as the survey is a real community instrument, it is yielding richer fruit by showing an almost nation-wide sense of community responsibility for what happens to every individual child. As expressed by Prof. Charles H. Judd, in connection with the Cleveland Survey, "the time has long since passed when the community can look with any complacency on the failure of a child." The survey accordingly appears to be the most serviceable method democratic communities have discovered by which they can secure the information and inspiration needed in order to discharge their ever-growing educational responsibilities.

In addition to the extensive application of the survey, the period under review is characterized by further refinement in survey methods. This is evident from a comparison of what is included with what is excluded in the scope of the surveys made at different times during the past five years. This gain becomes more impressive when one compares the older method of educational analysis by means of personal observation of individual activities with the newer analysis by means of carefully gathered and properly treated objective data. The advantage of having standardized tests and scales is most apparent in the survey movement. Several reports during this period bring out this feature in a most interesting fashion. In Salt Lake City the old and the new method are brought together in the reports on the work of the school under "the instruction and supervision as seen," on the one hand, and "the efficiency of the instruction measured," on the other. The examination of the Buffalo public schools is conspicuous because of its uniform reliance upon data secured by the method of observation, marked with such extreme care as to specify the number of schools, teachers, classes, or recitations supplying the material recorded. A similar aspect appears in one of the reports of the Cleveland survey, "Measuring the work of the public schools," which may be regarded as presenting "the central studies" of this investigation. As a preliminary to more exact

studies the 1,553 visits of observation were recorded by means of a specially devised card system. Efforts toward scientific accuracy were put forth in a scheme of varied tests, by means of which more stable judgment and definitive conclusions could be arrived at. A critical student of scientific method in education may now find in survey reports adequate material for determining the mutual checks and limitations of the old and the new method of interpretation of school activities.

STATE SURVEYS.

Maryland.—"Public Education in Maryland, A Report to the Maryland Educational Survey Commission," by Abraham Flexner and Frank P. Bachman (176 pp.; second and later editions, 230 pp.), on behalf of the General Education Board, presented to Gov. P. L. Goldsborough, December 20, 1915, makes distinctive contributions to the aim, method, and results of State-wide studies of educational systems. The work was undertaken in compliance with legislative action in 1914, under the directive form of a commission of three citizens. The field of the investigation included the elementary and the high schools of all the counties, and omitted Baltimore City. The original scope contemplated also a study of the higher educational institutions receiving State aid. The method of investigation, differing from previous State studies, involved chiefly the field labor of one surveyor who visited every county during nearly five months, selecting schools at random. It is significant that this study did not make use of the widely recognized tests and scales which have been employed in preceding surveys. The scope of the study included the social and economic situation of the State, the State board of education and State superintendent, the county school board and county superintendent, teachers, enrollment and attendance, instruction, and finance. It was found that "public education in Maryland is, on the whole, soundly organized" and that "the State deals generously with its public schools in the matter of money." It was also found, however, that many defects characterized the system. "The large majority of schools are poor; teachers are, for the most part, poorly trained; instruction is ineffective and obsolete; children attend school with disastrous irregularity; school buildings are far too often in unsatisfactory condition, school grounds neglected and untidy." Special recommendations, designed to correct the system, and in the future eliminate the defects discovered, were accordingly made. These involved improvements in the State organization, in the county organization, and in financial readjustments.

The presentation of the report to the General Assembly of Maryland was accompanied by a group of bills exhaustively revising the education system of the State. The bills were enacted into law and

became effective June 1, 1916. Among the main features of the resultant legislation it is noteworthy that the general structure of the public-school system of the State, involving the State, county, and district boards, remains practically as before. The State is not called upon to provide for increased appropriations. No officer, teacher, or employee was legislated out of office or otherwise affected so far as limitation of tenure, decrease of salary, or eligibility for reappointment is concerned. The legislation, however, seeks to make the State board, by certain readjustments, more effective, gives to the State superintendent of schools greater authority and responsibility, including the full responsibility over all professional matters pertaining to the system. Likewise, county boards will be more effective and a professional status given to the county superintendent. The staffing of the system includes adequate assistance in both State and county departments. The financial readjustment includes a consolidation of all State school funds and a distribution of public moneys after the deduction of the fixed charges for the maintenance of the general system. The apportionment of the funds to the counties will be as follows: Two-thirds, according to the total number of school children in the county between the ages of 6 and 14 years, and one-third, according to the aggregate days of school attendance. State aid to the counties is made conditional upon the local levy during a current year of 34 cents for every \$100 of assessable property. The counties at present below this minimum are required to increase school levies at the rate of 2 cents a year until the minimum of 34 cents is attained. The approval of the county commissioners must be secured for any levy over 40 cents for school purposes.

The most gratifying feature of the legislation consequent upon the survey is the compulsory school attendance provisions that are to go into effect. Earnest efforts had been made in the State since 1902 to secure reasonable legislation on compulsory school attendance, but without success. The present requirement provides as follows: Children 7 years of age and under 13 are to be in school the entire time the schools are in session unless excused by proper authority for reasonable and legal reasons; children 13 and 14 years of age are to attend at least 100 days during each school year, and children 15 and 16 years of age, unless they have completed the elementary school course, are to be in school 100 days each school year.

The legislation in which the Maryland survey culminated is striking. By one bound the State has leaped into a truly professional status in matters relating to public education. A legislative welcome was extended to the unanimous desire of the school forces, and the system is to receive at once the full benefit of the educational progress made in other States during a long period of years and after numerous efforts.

Wyoming.—On June 15, 1916, Mrs. Katherine M. Cook and Mr. A. C. Monahan, the two representatives of the United States Bureau of Education, transmitted to the Commissioner of Education the report of the survey of the educational system of the State of Wyoming. This report resulted from the action of the Wyoming General Assembly in 1915, which provided by law for the formulation of a school code committee of five members, whose duty was to submit in 1917 recommendations for a revised code of school laws. At the beginning of the work of investigation in July, 1915, it was decided to conduct a general survey of educational conditions in the State, in order to secure "a general measurement of the system as a State system in terms of its service to the State."

The survey comprised:

(a) A thorough investigation of grounds, buildings, water supply, etc., conducted through personal investigation and collection of information through questionnaires;

(b) A careful inquiry into the education and professional qualifications, living conditions, and salaries of teachers, conducted in the same manner;

(c) An intensive study of instruction offered in three counties selected as typical of general conditions made by personal investigation by members of the committee and representatives of the bureau;

(d) An investigation into qualifications and work of the county superintendents;

(e) A study of financial support, State, county, and local;

(f) General information concerning high-school and city-school systems.

The method of the inquiry included conferences, visits to schools and special institutions, and, where possible, questionnaires, designed to secure State-wide data. The report is published by the United States Bureau of Education, Bulletin, 1916, No. 29, and includes the following material: A brief historical sketch of the public-school system of Wyoming (by Prof. H. C. Dale); the present system as far as organization and administration are concerned—State, county, and local; the status of education in the State—buildings, teaching, attendance, instruction, supervision, revenue, and support; a comparison of Wyoming with other States in education; movements in other States as outlined in recommendations for Wyoming; and recommendations. Chapter VI, presenting the movements in other States, is a national survey itself.

COUNTY SURVEYS.

Georgia.—The study of rural school conditions in Georgia was continued, under the direction of the State department of education, by M. L. Duggan, rural school agent, and published in "The Educational Survey of Morgan County, Georgia" (77 pp.). The data secured included teachers, nearest school, grounds, building, equipment, organization, and organized help. The total attendance for each pupil in the different grades published in the report may become useful for comparative purposes in future studies.

Missouri.—"A Study of the Rural Schools of Saline County, Missouri," by Prof. J. D. Elliff and A. Jones (32 pp.), was published August, 1915, by the University of Missouri as No. 11 of the Education Series Bulletin. The data were secured through the cooperation of superintendent and teachers, and were tabulated by the help of a number of assistants. The descriptions include heating and ventilation, lighting, seating, care of room, drinking water, play and playgrounds, building and grounds, equipment, finance, attendance, community attitude toward the school, use of school building during previous year, and instruction, the whole resulting in a summary description of "the median school." The median value of the schoolhouse was found to be \$400; of the average barn, \$500; of the best barn, \$1,200.

Wisconsin.—Owing to a state of dissatisfaction with the development of the Milwaukee County School of Agriculture and Domestic Science, which began operations July 1, 1912, Walter Matscheck, director of the Wisconsin Efficiency Bureau, assisted by Miss Sara Rivet, presented, in May, 1916, a "Report of a Survey Made for the Milwaukee Taxpayers' League" (76 pp.). The declining efficiency of an elaborately equipped plant brought forward the question as to whether or not the school should be abolished. The survey did not undertake to answer this question; its purpose was only "to give all the facts as found from the study of the records, reports, documents, and from conferences, consultations, and observations." The question is left by the survey to be decided by the county authorities and the public.

California.—The utilization of the survey as a means of proposing a plan for the complete reorganization of a system of county schools is illustrated in "Reorganizing a County System of Rural Schools: Report of a Study of the Schools of San Mateo County, Cal.," by J. Harold Williams. The study was made in 1914, at the suggestion of Prof. E. P. Cubberley, and is published by the United States Bureau of Education (Bulletin, 1916, No. 16, 50 pp.). Following a general survey of the county with reference to its geological, geographical, social, and economic features, the study of the present school system

leads to the proposal of a system designed "to meet more adequately the needs of the people of this larger community." A special plea is made for the county-unit plan to supersede the district-unit plan in force at the time of the investigation.

Oregon.—During the school year 1915-16 Prof. Fred C. Ayer conducted, by means of reports and personal visitation, a survey of the educational conditions of Lane County, Oreg. A portion of the material collected is presented under such topics as adjustment to geographical conditions, instruction and the course of study, material equipment, organization, etc., and forms a part of the larger undertaking of the Presbyterian country church work on the Pacific coast, in cooperation with the University of Oregon, which included a study of the economic, social, and religious life of this county. The report, "A Rural Survey of Lane County, Oregon," was published August 15, 1916, by the extension division of the University of Oregon as Bulletin, New Series, Vol. XIII, No. 14 (109 pp.), pages 71-109 comprising the educational section.

CITY SURVEYS.

Los Angeles, Cal.—A novel plan of securing disinterested educational experts to make a brief investigation of the activities of the schools under its direction was adopted by the board of education of this city when it commissioned Presidents Butler, of Columbia University, and Judson, of the University of Chicago, on February 14, 1916, to name three persons, preferably "from Eastern States." for this purpose. Of those named only two, Dr. Albert Shiels and Dr. Walter A. Jessup, were able to visit the city, and accordingly constituted the advisory committee whose "information, assistance, and advice" were sought. The "Report of the Advisory Committee to the Board of Education of the City of Los Angeles on Certain Aspects of the Organization and Administration of the Public School System" (177 pp.) includes the results of the study which was begun April 17 and concluded May 22, 1916, and was presented as "in no sense a complete survey."

The investigation of the problems of administration, compulsory attendance, the elementary, intermediate, and high schools and junior colleges, the evening schools, the proficiency of pupils, and the experience, training, and certification of the members of the staff culminate in the leading recommendation that there be established a division of educational research to which should be referred for ample and continuous study all the features of the system. The item of cost also appears as a recurrent determining factor in the

analysis of several aspects of the system, and recommendations looking toward betterment without cost increase are made.

Denver, Colo.—A report of the school survey of School District No. 1 in the city and county of Denver was published in the latter part of 1916. The report comprises five parts and a supplemental report, as follows:

- I. General Organization and Management. By Franklin Bobbitt.
 - II. The Work of the Schools. By Franklin Bobbitt and C. H. Judd.
 - III. Vocational Education. By C. A. Prosser and W. H. Henderson.
 - IV. The Business Management. By J. T. Byrne.
 - V. The Building Situation and Medical Inspection. By Lewis M. Terman.
- Supplemental report on Organization and Administration. By E. P. Cubberly.

Part I points out the peculiar situation by which "a form of school government devised in the main for rural and village districts has been rather unconsciously inherited by the large metropolitan city of Denver."

In Part II of the report Dr. Bobbitt discusses reading, literature, and memory work; vocabulary; spelling; pronunciation; language, grammar, and composition; penmanship; German in the grades; history; civics; geography; arithmetic; nature study or elementary science; hygiene; physical education; music; and "Finding the time." Dr. Judd analyzes the internal organization of the high school, the relation between the elementary and high school, and possible reorganization of the upper elementary grades to adapt the work better to the secondary schools.

In Part III the census occupation statistics are studied; child labor and compulsory school attendance are reviewed; and it is recommended that the shopwork of the seventh and eighth grades have for its dominant aim the giving of prevocational training. The importance of salesmanship as a part of commercial education is pointed out. Household arts subjects are considered so important for girls that a department of home economics is recommended, to include both elementary and high schools, and the surveyors urge that Denver at once enter, as other cities are entering, upon the development of a complete program for vocational education.

The report on business management points out that—

of several experts consulted or brought to Denver in connection with the present school survey, each in his individual capacity arrived at practically the same conclusion with respect to the fundamental weaknesses in the public school system of Denver as administered up to the present year. * * * The evidence points clearly to a lack of centralized directing power guiding all business matters and procedure in accordance with a clearly defined business policy and program of action. There is duplication of functions and of duties and responsibilities.

In Part V, Dr. Terman finds that Denver has relatively few school buildings erected later than 15 years ago, and that the average "age"

of its classrooms is a little more than 22 years. Few of the school-rooms are well lighted, he says; many of the heating systems are primitive; the ventilation is unsatisfactory in at least half of the buildings; dusty and parched air is carried to the classrooms; the toilets are usually dark, often cold, and sometimes foul smelling. Some of the school buildings, according to Dr. Terman, are surrounded by playgrounds hardly wider than an alley, and 80 per cent of the school children have less than a reasonable amount of play room for a city of Denver's type.

In the supplemental report on "Organization and Administration," Prof. Ellwood P. Cubberly renders a professional opinion as to whether the new by-laws adopted by the board of directors of Denver on January 12, 1916, conform to good administrative principles in the matter of city school control, and whether they will secure an improvement over the form of organization previously in force. His answer is an emphatic affirmative.

Leavenworth, Kans.—The survey made of the public schools of Leavenworth, Kans., during the early part of 1914 is one of the most interesting cooperative enterprises that has appeared during the whole survey movement. The undertaking was initiated by the superintendent and teachers and financed largely by contributions from the latter. The board of education provided for the expense of publication. The investigation was conducted under the auspices of the bureau of educational measurements and standards of the Kansas State Normal School, and directed by Prof. Walter S. Monroe, who was assisted by Flora J. Cooke, Ella V. Dobbs, Minnie E. Porter, and Walter R. Smith. Dr. W. C. Bagley, Dr. J. F. Bobbitt, and Dr. W. W. Charters served in the capacity of an advisory committee. The report (202 pp.) was published in November, 1915.

The report is the result of an elaborate inquiry into all the features of the city and its traditions, the general scheme of the school system, and its activities. Ample attention is given to every detail. The results of the teaching in the schools were estimated by the methods of observation, and, in a number of instances, by the standard tests. The observation process was guided by a consistent effort to judge the effects of teaching upon the pupils in terms of motivation, evaluation, organization, initiative, and acquisition. The inevitable questions as to the value of a survey and of the results that are accomplished find an interesting answer in this report which includes a statement by Supt. Moore 15 months after the first draft of the report had been made accessible to the local authorities, teachers, and community.

Iowa.—The conditions obtaining in the schools of 181 cities and towns in Iowa from April 1, 1914, to January 1, 1915, are found in the report on the "Hygienic Conditions in Iowa Schools," by Irving King, published by the University of Iowa as Extension Bulletin

No. 11, May 29, 1915. The data were secured by means of a questionnaire containing approximately 176 questions which were designed to be "filled out while the school was in session and the children actually in their seats." To exhibit the main facts discovered, 32 diagrams are devised, such as: 21 per cent of the school grounds are less than 1 acre in size; 15 per cent are reported as unsuitable for play; 86 per cent of the stairways are wooden; 40 per cent of the schools depend on wells for drinking water; 40 per cent report the use of paper towels; 70 per cent hang thermometers too high; 11 per cent of the schools report adjustable seats; 34 per cent of the schools report testing the eyes of children; and 3.5 per cent report dental inspection, etc.

Salt Lake City, Utah.—On June 30, 1915, the "Report of the Survey of the Public School System of Salt Lake City, Utah" (324 pp.), which was made during the month of May, was submitted to the board of education. Dr. Ellwood P. Cubberley, director of the survey, was assisted by James H. Van Sickle, Lewis M. Terman, Jesse B. Sears, and J. Harold Williams. The work was accomplished during 18 days. The chief object of the inquiry was to study the leading problems in relation to buildings, teachers, and finance, and to suggest the new legislation which was deemed essential to make the progress to which the school system was entitled. The report closes, accordingly, with a suggested law for the management of the Salt Lake City school district. The report is admirably arranged under the general headings of organization and administration, the work of the schools, buildings and health, and finances. An extended array of over a hundred figures and tables illuminate the data and discussions. As already mentioned, the survey is characterized by an interesting alinement of what might be designated as the old and the new methods of estimating the work of the schools. An application of the recently devised standards was made in the subjects of writing, spelling, composition, arithmetic, and reading in the elementary schools. The outcome was to secure results that are comparable with similar studies made in other cities. By this means the survey has made contributions to educational progress outside the system under investigation.

Buffalo, N. Y.—A new agency in the conduct of educational surveys appeared when the University of the State of New York and the State department of education undertook, on June 5, 1914, in response to the request of Supt. Emerson, to make an examination of the school system of this city. In undertaking this work, Dr. John H. Finley, president of the university and commissioner of education, announced it as his intention "to make a careful inquiry into the management of the schools of various cities, from time to time, in order that we shall have accurate knowledge of their excellence,

their defects, or needs." The work was conducted under the direction of Dr. Thomas E. Finegan and involved the time of about 14 weeks for each of 10 men of the staff of the inspection division and other members of the department staff, between September, 1914, and February 1, 1915. The inspection of the school plant received about one-third of the time, the remainder being given to the observation of the work of instruction and to an inquiry into the general management of the school system. In estimating the quality of the activities within the classrooms, the method of visitation was carefully safeguarded by having the observers work in groups of three. The fact basis for the general conclusions was made in a total of 3,011 classroom visits. The leading lines emphasized in the examination included organization and administration, the school plant, the teaching staff, teaching in the elementary schools, teaching in the high schools, industrial education, mandatory statutes, and medical inspection.

In view of the historical development of public education peculiar to Buffalo, the study lays chief stress upon the legislation which is inherently involved in the situation. It was found "that the weaknesses of your school system are fundamentally those inherent in its organization." It is concluded that—

no enduring progress can be expected until the whole system is so organized as to confide the direction and control of the schools in a board of education, independent of political association, which shall have full power to administer the schools and full responsibility for the results.

The report further declares:

The ineffectiveness of the supervision of the schools, the inefficiency in the teaching force, the utter lack of respect for superior authority which permeates the whole system, the waste of pupils' time and of taxpayers' funds, the absence of good business methods and procedure, and the failure to obtain from the public-school system the greatest service which that system is capable of rendering the city, all of which will be clearly shown in the succeeding chapters of this report, are directly traceable to the type of organization under which the school system of Buffalo has been controlled, operated, and managed for a half century. The continuance of the same general plan of school organization does not give to the city of Buffalo encouragement to believe that the city will have under such plan a more stable, independent, efficient, and effective administration of her public-school system.

Ashland, Oreg.—In July, 1915, the University of Oregon published, as Bulletin No. 11, volume 12, the report of a "Constructive Survey of the Public School System of Ashland, Oreg." (52 pp.), which was made by Prof. Fred C. Ayer, Supt. Charles R. Frazier, and Prof. Don C. Sowers a few months earlier. Because of the town's size, it was possible to give exhaustive attention to all the features of school and community interests. While giving, in general, approval of the public schools which this community had developed,

the survey had as its chief aim that of specifying in its recommendations the "proper points of departure for constructive improvements."

Port Townsend, Wash.—In August, 1915, the University of Washington published, as University Extension Series No. 17, a report of "A Survey of the Port Townsend Public Schools" (112 pp.), which was conducted under the direction of Prof. Herbert G. Lull, who had been assisted by Joseph K. Hart, Henry M. Grant, and Paul J. Kruse. The unfortunate economic history of this "boom" town in the far Northwest lends special interest to the study which, as in Ashland, undertook to solve the problem of "what is practical and realizable for Port Townsend in the next 10 years." A review of the administration and of the course of study and instruction and the working out of the educational program for the future are especially characterized by the attempt to show clearly the intimate conditions between public education on the one hand and the industrial, economic, political, and social world on the other. More than one-fourth of the report is devoted to the results of tests which were given in spelling, writing, arithmetic, reading, English, and composition.

Cleveland, Ohio.—It is 10 years since the inquiry into the government, supervision, and course of study of its public schools was made by the educational commission appointed by the Cleveland Board of Education. Prior to that time, and since, this city evidenced a great deal of educational unrest. This has been indicated by the frequent changes of administration as well as by an increasing amount of public criticism. During 1915 the school system underwent an extensive and painstaking examination as a part of the Cleveland Foundation Survey and under the immediate supervision of the survey committee of the Cleveland Foundation. The education survey was directed by Dr. Leonard P. Ayres and a large staff of specialists and assistants. The survey staff completely coordinated its different lines of work, while at the same time allowing departmental initiative and responsibility for each specialist assigned to a particular task.

The report of the Cleveland survey is unique in its mode of publication. The reports on the special topics are being printed in a series of small bound monographs, of which 22 had been issued on June 30, 1916. The series will be completed with the addition of one special report and two summary volumes.¹

The progressive conclusion of this survey was treated in a unique manner. As a substitute for the usual practice of issuing the report in completed form, the material in the different divisions of

¹These reports can be secured from the survey committee of the Cleveland Foundation, Cleveland, Ohio, and from the division of education of the Russell Sage Foundation, in New York City, at a uniform price of 25 cents each, and of 50 cents for each of the three double volumes in the series.

the investigation was made public and discussed at the time of its completion. This interesting procedure has been thus described by the director of the survey:

These small volumes appeared at such intervals that they were made public and discussed at a series of weekly luncheon meetings, open to the public, and held in one of the city's leading hotels. At these meetings the report was discussed by the author of the volume or the director of the survey. In addition, other similar lunch meetings were held while the preparatory work of the survey was in progress. The result was that for more than a year weekly meetings were held at which the educational problems of the city were discussed, and during this entire period the capacity of a large hall was no more than sufficient to accommodate the audiences that attended. The newspaper reports of these conferences were unusually extensive and detailed.

The leading feature of the inquiry as a whole is the division of its work into two main lines: One relating to the regular work of the public schools; the other to industrial education. The subjects covered and the authors of the volumes constituting the first group are, in the order of their publication, as follows:

Health work in the public schools—*Leonard P. Ayres.*

Child accounting in the public schools—*Leonard P. Ayres.*

What the schools teach and might teach—*Franklin Bobbitt.*

Financing the public schools—*Earle Clark.*

Education through recreation—*George E. Johnson.*

Educational extension—*Clarence A. Perry.*

School buildings and equipment—*Leonard P. Ayres.*

Overcrowded schools and the platoon plan—*Shattuck O. Hartwell.*

Measuring the work of the public schools—*Charles H. Judd.*

School and classes for exceptional children—*David Mitchell.*

The teaching staff—*Walter A. Jessup.*

The school and the immigrant—*Herbert A. Miller.*

The public library and the public school—*Leonard P. Ayres and Adele McKinnie.*

School organization and administration—*Leonard P. Ayres.*

The subjects covered and the authors of the volumes relating to the field of industrial education are, in the order of their publication, as follows:

Department-store occupations—*Iris P. O'Leary.*

Boys and girls in commercial work—*Bertha M. Stevens.*

Railroad and street transportation—*Ralph D. Fleming.*

The building trades—*Frank L. Shaw.*

The printing trades—*Frank L. Shaw.*

The metal trades—*R. R. Lutz.*

The garment trades—*Edna Bryner.*

Dressmaking and millinery—*Edna Bryner.*

The method of investigation and the form of presentation of the report are exemplary in the contribution which they make to the solution of these special problems of school systems. The typical procedure is to give, first, an adequate and appreciative

historical account of the genesis of the particular situation being studied; second, a complete presentation of the primary data acquired and a patient analysis of the educational factors involved; and, finally, an interpretation of the situation by means of recommendations for such readjustments as seem to promise relief from the general situation. Summaries of the different chapters in each report afford an easy means of keeping up with the progress of the particular investigation. Tables, diagrams, and photographs are used in abundance. By these various means the report of the investigation forms an interesting illustration of how to keep the material in good scientific form and at the same time clarified for easy understanding by the public.

The director of the education survey finds the origin of the city's unending educational troubles to be in the methods of board control. In the volume on "School Organization and Administration," he writes:

In this city there is a tradition that many years ago there happened to be an able and aggressive board of education at a time when the city superintendent was elderly and unaggressive. It is said that during this period the board took over little by little many of the details of the superintendent's work, reached decisions for him, and generally relieved him of the more burdensome duties of his office. It is said that this inaugurated an unwritten rule throughout the school system that decisions on all matters should be put off whenever possible until they could be referred to the board.

Boards of education exist for the purpose of getting public schools managed, not for the purpose of managing the schools themselves. Their work is to get things done rather than to do them. When they overlook this fundamental principle, confusion results, responsibility becomes scattered, details displace fundamentals. After a year of study and the preparation of 25 volumes of reports the survey staff has reached the conclusion that this is what has happened in Cleveland.

Grand Junction, Colo.—"A demand on the part of the people for a reduction in the public expenses and the desire on the part of the board of directors to meet this request without crippling the schools" led the board of directors of Grand Junction, Colo., on March 4, 1916, to authorize an educational survey. The chamber of commerce of the city cooperated to the extent of defraying the expenses above \$150. (The total cost, including printing the report, was \$167.54.) The survey committee comprised three lay members—"and any member of the school board may be a member ex officio of this committee"—and three professional members: Frank L. Clapp, director, and William A. Cook, of the University of Colorado, and Samuel Quigley, of the Colorado State Normal School. The time spent on the ground by each of the professional members totaled 10 days. The report (64 pp.) was made in May, 1916, and includes the results of the study made of organization and control, instruction,

and financial support. The Ayres spelling test, Starch's silent-reading test, Curtis's arithmetic test, and Ayres' penmanship test were given. Twenty Colorado towns were selected for purposes of comparison.

Survey outlines.—In response to requests for suggestions as to "how to have a school survey without expense," made by "superintendents of schools in the smaller cities where funds for the employment of a survey commission are not available," the United States Bureau of Education issued in January, 1916, City School Circular, 1915-16, No. 2, entitled "Some Suggestive Points for Superintendents in the Smaller Cities Who are Surveying Their Own Schools" (4 pp.). The topics included and outlined by suggestive procedure are: Efficiency of schools, administration and supervision, teachers, buildings, and hygiene and sanitation. A brief outline of suggestions for a community survey, including the social and vocational phases as related to the schools, is added. These suggestions have been adopted by a number of superintendents of smaller cities as a guide for auto-surveys.

SPECIAL INSTITUTIONS.

The "Report of a Survey of the University of Oregon made by the United States Bureau of Education, September, 1915," (published as University of Oregon Bulletin, vol. 13, No. 4, December, 1915, pp. 28), is one of the earliest results of the announcement by the Commissioner of Education that "the services of the Bureau of Education were freely placed at the disposal of any educational institution in the United States which might desire a survey of its work and organization." In the course of 22 days, Dr. S. P. Capen, specialist in higher education, made a study of the following phases of the work of the institution: The relation of the university to the State, the organization and administration, including the board of regents, administrative officers and heads of departments, the faculty, its training and composition, methods of appointment, provisions for research and results in service to the State, the curricula of the various schools and departments, the students and requirements for admission and graduation, the financial status in comparison with that of other State institutions, and equipment.

In a limited number of recommendations the surveyor emphasizes the importance of consistent effort on the part of the university to interpret itself to the people of the State. The board of regents should meet more frequently and should follow a more consistent policy of educational control. The increasing recognition of the faculty as the governing educational body of an institution of higher learning is emphasized in the need of cooperation between the board

of regents and representatives of the faculty in shaping educational policies and in the suggested creation of an academic council to act in the capacity of adviser to the president. Emphasis is placed upon the need of making more liberal provision for research.

Iowa.—"State Higher Educational Institutions of Iowa" is the title of the report of an epochal survey conducted under the direction of the United States Commissioner of Education and published by the Bureau of Education, Bulletin, 1916, No. 19 (206 pp.) The study of the situation among these institutions was designed—

To restore and preserve peace between the State higher schools, to facilitate a harmonious evolution of the State's higher educational system and each of its parts—these are the ends which the State itself seeks. These are the ends which the commission has held constantly in view.

The problem approached in this inquiry, largely because of the same situation in 19 other States, is regarded as the most important problem in educational administration in the United States at the present time. It involves all the issues that have developed between the State universities and the land-grant colleges, not to mention the other State-supported educational institutions.

This inquiry was authorized by the Iowa State Board of Education May 15, 1915, the report being requested by March 1, 1916. The commission included Dr. Samuel P. Capen, chairman; Dr. James R. Angell, Dr. Kendric C. Babcock, Dr. Liberty H. Bailey, Dr. Hollis Godfrey, Dr. Raymond M. Hughes, and Mrs. Henrietta W. Calvin. Upon organizing, it "decided to consider the whole field of higher education in Iowa," in order best to supply information upon the seven matters specified by the State board of education:

1. The duplication in courses in education and psychology at Ames and Iowa City.
2. The extent of liberal arts courses offered at Ames.
3. Should there be a school of journalism at this place?
4. The status of graduate work at the State university, State college, and State Teachers' College, and preventing duplication.
5. The feasibility of consolidating the extension work of these three institutions.
6. The adequacy of the buildings.
7. The best avenues of expansion of the State university and the State college.

The surveyors collected extensive data from the institutions, opinions from prominent citizens, and additional material by visits to the institutions and through various conferences. The report comprises 16 chapters, and concludes with a grouping of the 52 recommendations.

The most important contribution of this study is to be found in the *principle of major and service lines*, which it offers as a means of marking out the desired adjustment of these types of institutions.

Each State institution should have assigned to it certain major fields, which it may be expected to develop to their fullest extent. * * * Service lines are such subordinate subjects as are essential to the proper cultivation of a major line. * * *

Once this principle of major and service lines is adopted, the whole situation clears up, not only as regards intramural work, but also as regards extension work. An institution would be permitted to do extension work only in a major line.¹

Washington.—On March 9, 1915, the Legislature of Washington provided by law for a commission to make an educational survey of the State. This body of six members was designated the Commission of Educational Survey of Washington. The cooperation of the United States Commissioner of Education was secured, and the survey was made under his direction by Dr. Samuel P. Capen, Mr. Harold W. Foght, and Dr. Alexander Inglis. The meetings and labors of the commission extended from July 5, 1915, to April 15, 1916. The work of the three specialists extended from March 4 to April 14, 1916. The report of the commission was made April 27, 1916. The full report of the commission and of the survey is published by the United States Bureau of Education as Bulletin, 1916, No. 26.

The scope of the inquiry was extended beyond the five State institutions, namely, the University of Washington, the State College of Washington, and the normal schools at Cheney, Ellensburg, and Bellingham, so as to include—

such a study of the elementary and secondary schools of the State and of the preparation of teachers in these schools as was necessary to an intelligent consideration of the functions and standards of the higher schools.

The occasion of the considerations leading to this inquiry is well described in this statement:

There is at present no machinery for the formulation of State policies in higher education. The result of this lack is painfully apparent, and has in fact given rise in a large measure to the difficulties which the present survey is designed to remedy.

The topics treated in the report include: General consideration of higher education in Washington, with incidental treatment of secondary education; the support of higher education in Washington and in other States; State officials and administrative machinery; the formulation of State policies in higher education; costs of State university and State college; present scope and functions of these institutions; warranted and unwarranted duplications, with an application of "the principle of major and service lines" developed in the Iowa survey; differentiation of functions, the departments of education, etc. Twenty-one recommendations are made relating to

¹ For a more detailed account of the Iowa Survey, see ch. 8, p. 124.

the university and the college. Six chapters form a special section, which presents general aspects of the public-school system and offers 11 recommendations. The State normal schools have four chapters, and 12 recommendations relating thereto are made.

MISCELLANEOUS.

In view of the intimate relationship between the standards and tests and school surveys during the recent years, note should be taken of every effort designed to improve the scientific character of educational judgments. Every student of these newer tendencies will need to refer to two recent publications. The Fourteenth Yearbook, Part II, of the National Society for the Study of Education (pp. 83, June, 1915, University of Chicago Press), by Arthur C. Boyce, is a monograph on "Methods for Measuring Teachers' Efficiency." The author describes the present methods of measuring teaching efficiency, summarizes several studies on qualities of merit and their values, develops a method for guiding and controlling the rating of teachers, shows the results arising from its application by actual tests, and concludes with a technical discussion of the relative importance of qualities of merit. Sample score cards for rating teachers are appended.

More important still is the Fifteenth Yearbook, Part I (172 pp.), of the National Society for the Study of Education, which appeared from the same press in February, 1916. This yearbook is devoted to "Standards and Tests for the Measurement of the Efficiency of Schools and School Systems," and is the 1916 report of the committee of the National Council of Education of the National Education Association on standards and tests of efficiency. The 15 chapters include the following contributions and discussions:

A Measuring Scale for Physical Growth and Physiological Age, by Bird T. Baldwin; Notes on the Derivation of Scales in School Subjects, with Special Application to Arithmetic, by B. R. Buckingham; Score Card for City School Buildings, by George D. Strayer; Completion Tests for Public-School Use, by M. R. Trabue; Work of the Department of Educational Investigation and Measurement, Boston, Mass., by Frank W. Ballou; The Application of Standard Measurements to School Administration, by D. C. Bliss; A Half-Year's Progress in the Achievement of the Schools of Bloomington, Ind., as Measured by the Thorndike Visual Vocabulary Test and by the Courtis Tests, Series B, by H. G. Childs; Courtis Tests in Arithmetic, Value to Superintendents and Teachers, by S. A. Courtis; Use of Standard Tests at Salt Lake City, Utah, by Ellwood P. Cubberley; Reading, by Charles H. Judd; Studies by the Bureau of Research and Efficiency of Kansas City, Mo., by George Melcher; The Effects of Efficiency Tests in Reading on a City School System, by E. E. Oberholtzer; Investigation of Spelling in the Schools of Oakland, Cal., by J. S. Sears; Standard Tests as Aids in the Classification and Promotion of Pupils, by Daniel Starch, and The Use of Mental Tests in the School, by Guy M. Whipple.

The pursuit of more exact procedure in dealing with educational problems is increasingly showing a double value. Because of their accuracy, the results thus acquired are more satisfactory than those with which we are traditionally familiar through the method of observation. A more exact procedure also tends to open the way for the discovery of new and unexpected problems in teaching and learning and in organization and administration. The chairman of the committee, Prof. George D. Strayer, well expresses these values in his introduction to this monograph:

The measurement of results of any sort, whether of the achievements in school subjects, of the cost of any unit or function, or of the rate of progress, and the like, furnishes primarily a knowledge of the situation which makes clear the problems involved and which may suggest a method of experiment that looks toward the improvement desired.

Madison, Wis.—Because of its treatment of certain educational situations, attention may be called to the play and recreation survey conducted by the executive committee, under the chairmanship of Prof. Clark W. Hetherington, of the representative committee appointed by the Board of Commerce of Madison, Wis. The report (103 pages) was made June, 1915, and published the following October. This board was especially interested in securing “an inventory of the positive and negative factors of recreation” in its own city. Chapter IV presents the recreational facilities of the public schools. Chapter VIII discusses home work and play of children. Chapter IX is principally a contribution by Dr. William Healy on social and educational conditions of play.

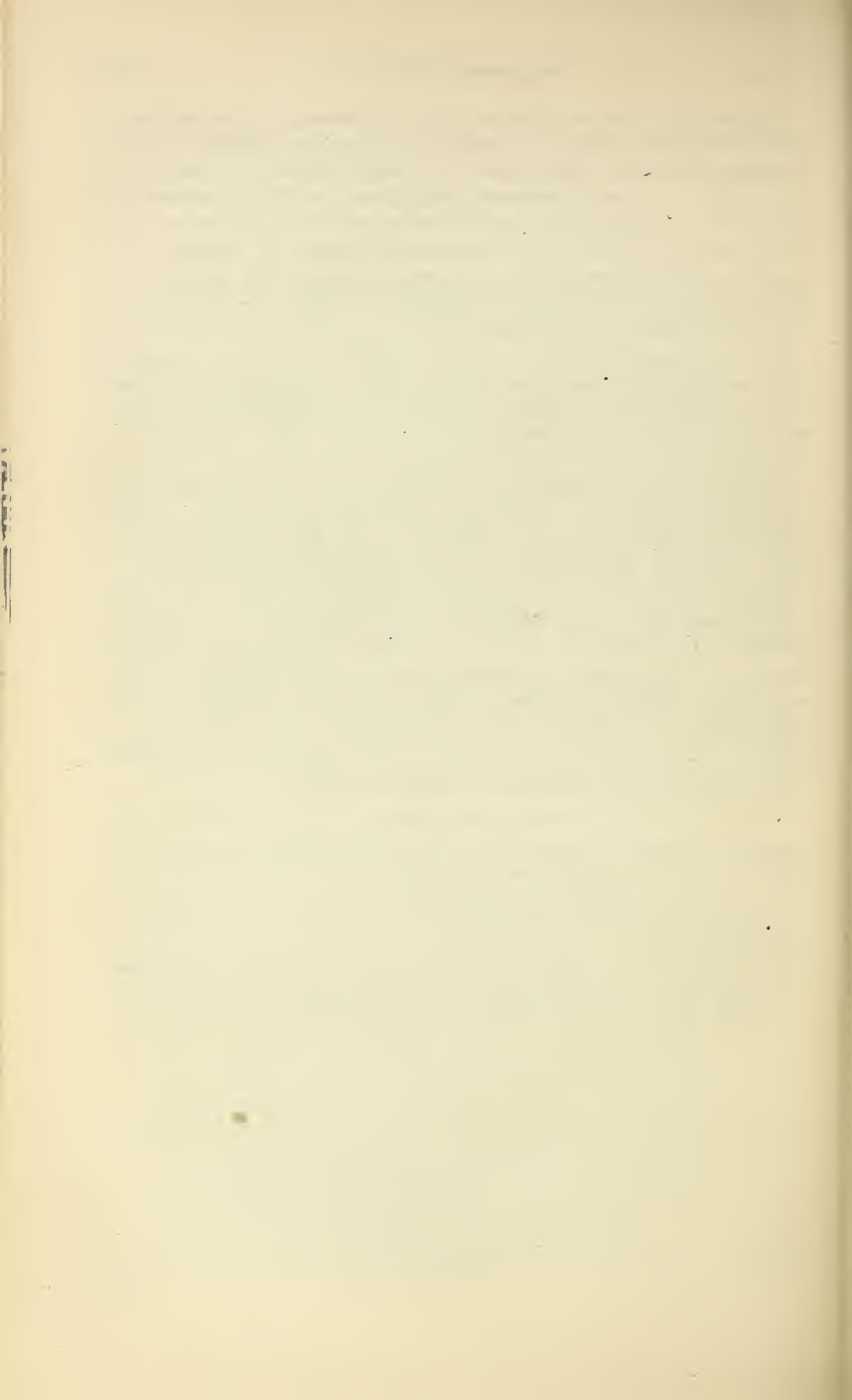
UNPUBLISHED SURVEYS.

Jamestown, N. Dak. By the United States Commissioner of Education.

Webster Groves, Mo. By Mr. W. S. Deffenbaugh, Dr. W. W. Charters, and Mr. H. J. Gerling, in March and April, 1916.

San Francisco, Cal. By representatives of the United States Bureau of Education, 1916.

Nassau County, N. Y. By the New York State Department of Education, Teachers' College, and the United States Bureau of Education, from January to March, 1916, under the auspices of the County Improvement Association.



CHAPTER XXII.

EXTENSION EDUCATION.

By J. L. MCBRIEN,

School Extension Agent, Bureau of Education.

Extension education is such a broad term, its field so large, and its agencies so numerous that it is difficult to limit its meaning and scope to one chapter. It has been called, at different times, by different people, "the lecture system," "university extension," "home education," "educational extension," "popular education," "school extension," and "extension education."

As to the meaning and scope of the work and what it is that is being extended, it may be a wider use of the public school plant; the beautifying of school buildings and grounds; the improvement of teachers in service; the establishment of school, home, and county libraries; the direction of boys' and girls' industrial clubs in home-project work, including school credit therefor; the organization of parent-teacher associations, so as to secure a better cooperation of the home and the school in the education of the child. It may be a campaign for a longer school term, better qualified teachers, better supervision, and a larger unit of taxation and administration; a crusade against illiteracy, such as is now being waged in Alabama, North Carolina, and Oklahoma; a fight to amend the State constitution so as to provide for local taxation for education, as now going on in Alabama, or to permit a higher rate of school tax, as in the case of Arkansas and Texas; or a revival of public sentiment in behalf of popular education, as in Delaware. It may mean county school fairs, as in Maryland and Tennessee; elementary school promotion exercises, as in Nebraska and North Carolina; correspondence courses of study and lecture centers, as now directed by many universities, colleges, normal schools, and by special correspondence schools; the commencements held and the lecture courses maintained by high schools, colleges, universities, normal schools, Young Men's and Young Women's Christian Associations, churches, Chautauquas, and other organizations throughout the country; or a nation-wide campaign for better rural schools, like that now being carried on by the Department of the Interior through the Bureau of Education.

The limited scope of this chapter will allow only brief mention of some of the more significant recent developments in extension education.

CORRESPONDENCE STUDY.

Correspondence study, once looked down upon in many educational centers, has gradually won its way to recognition in some of the strongest American institutions of learning.

The number of active students pursuing correspondence study for the school year 1915-16 at the University of Wisconsin was 10,000; the teaching staff in the correspondence division of the university, comprising the instructors who write the tests and examine correspondence-study papers or conduct classes, is about 25 on full time, 15 on part time, and 20 on a fee basis, besides 12 on full time and 16 on part time at the district centers.

According to the report of the University of Chicago, published March, 1916, for the year ending June 30, 1915, the total number of registrations in the correspondence division was nearly 5,000. The total number of different instructors was 126.

According to the report of the extension division of the University of California the number of university extension classes rose from 66 in 1914 to 149 in 1915, the enrollment of students in the bureau of correspondence instruction from 1,506 to 3,399, and the number of lecture centers from 21 to 42.

LECTURES.

In addition to the more strictly educational lectures offered by members of the extension division at extension centers, the University of Minnesota has entered the field of lyceum courses of popular lectures, entertainments, concerts, and dramatics. The general extension division of this institution obtains the services of the best lecturers as well as of the lyceum companies, presenting entertainments, readings, and concerts at a much lower rate than is possible for the average community. The university recognizes that the drama in most of the small towns, as well as in many of the smaller cities, is in a decadent state, and it is seeking to displace harmful agencies by providing something wholesome, uplifting, inspiring, and entertaining in their stead.

City boards of education.—One of the best examples of successful extension education is found in the course of free lectures under the direction of the Board of Education of the city of New York. According to the Twenty-fifth annual report of the supervisor of lectures there were 174 lecture centers, 676 lecturers, speaking on 1,695 topics, before 5,405 audiences. The total aggregate audience

was 1,154,066, an average of 214 per lecture. The attendance was an increase of 15,364 over the preceding year. For 25 years these free lectures have cost the city of New York over \$150,000 annually.

UNIVERSITY WEEKS.

For two or three consecutive years past the University of Minnesota has endeavored to carry the university atmosphere to the people of the State through somewhat unique forms of visitation called university weeks, reaching about 25 towns on each year's circuit. The university week is a six-day program conducted in each of the towns visited throughout the State. During these six days the effort is made to present in epitome as many as possible of the widespread activities of the university. Members of the faculty lecture on a great variety of subjects, the glee club gives concerts, the debating societies hold debates, the dramatic club gives performances of one or two plays, various musical organizations give concerts; there are talks to business men at noonday lunches and talks to women's clubs in the afternoon. The ultimate purpose is to stimulate the constructive force for each community and to produce permanent, wholesome effects. It is a singularly successful way of making the people of Minnesota well acquainted with their university. It follows that they better appreciate the university, realizing that it is their institution—that it is of them, by them, and for them, and not the property of the board of regents or the faculty members.

OTHER AGENCIES IN EXTENSION EDUCATION.

Few people realize the extent to which the United States Government, through its free publications and the sales at cost of its publications, through Congress, and through the Congressional Library, is engaged in extension education throughout the country.

Public documents.—During the fiscal year ending June 30, 1915, 34,714,186 copies of Government publications were mailed free by the Government Printing Office on mailing lists and miscellaneous orders of the various departments of the Government. In addition, there were also sold, at cost, by this office 3,252,919 Government publications, making a total of 37,967,105 copies of Government publications thus distributed. These publications not only report the legislative, executive, financial, postal, military, and naval functions common to all governments, but also present the results, in popular printed form, for the instruction and practical use of all the people, of scientific investigation conducted by the Government. These various bulletins, reports, and publications now number over 200,000 separate publications.

The following statement shows the number of departmental publications received and distributed during the fiscal year 1915:

Departmental publications, 1915.

Department.	On hand July, 1914.	Received.	Total.	Mailed.	On hand.
Agriculture.....	7, 423, 456	28, 008, 727	35, 432, 183	26, 386, 661	9, 045, 522
Census.....	581, 231	358, 531	939, 762	436, 208	503, 544
Civil Service Commission.....	2, 639	11, 514	14, 153	9, 836	4, 317
Commerce.....	321, 867	2, 249, 750	2, 571, 617	2, 242, 674	328, 943
Education.....	81, 982	353, 576	435, 558	347, 975	87, 583
Engineer Department.....	3, 885	6, 298	10, 183	1, 791	8, 392
Ethnology and American Historical Association.....	33, 211	7, 970	41, 181	11, 103	30, 078
Federal Reserve Board.....		26, 250	26, 250	24, 720	1, 530
Geological Survey.....	429, 873	579, 269	1, 009, 142	456, 943	552, 199
Insular Affairs.....	17, 677	5, 580	26, 257	8, 427	17, 830
Interior.....	80, 607	79, 446	160, 053	69, 151	90, 902
International Joint Commission.....		3, 805	3, 805	3, 805	
Interstate Commerce Commission.....	81, 493	820, 615	902, 108	766, 293	135, 815
Justice and Judiciary.....	463	126, 018	126, 481	126, 374	107
Labor.....	139, 857	466, 421	606, 278	411, 440	194, 838
Library of Congress.....	36, 032	48, 150	84, 182	37, 669	46, 513
Mines Bureau.....	590, 298	1, 020, 600	1, 610, 989	827, 527	783, 371
National Museum.....	103, 826	45, 074	148, 900	43, 366	105, 534
Navy.....	19, 307	57, 620	76, 927	44, 662	32, 265
Post Office.....	188		188	10	178
Public Health Service.....	272, 473	2, 054, 751	2, 327, 224	1, 651, 244	675, 980
Smithsonian Institution.....	18, 895	38, 203	57, 098	24, 535	32, 563
Standards Bureau.....	122, 378	182, 865	305, 243	120, 086	185, 157
State.....	21, 869		21, 869	21, 869	
Treasury.....	498, 402	560, 947	1, 059, 349	633, 550	425, 799
War.....	22, 675	5, 935	28, 610	6, 267	22, 343
Total.....	10, 904, 584	37, 120, 915	48, 025, 499	34, 714, 186	13, 311, 313

THE LIBRARY OF CONGRESS.

The Library of Congress is one of many seldom-recognized agencies in extension education. It contains two copies of every book, magazine, encyclopedia, and reference work printed in the United States under the Federal law relating to copyright. It contains about 2,500,000 books, 150,000 maps and charts, 750,000 volumes and pieces of music, and 400,000 prints (pieces). The number of persons who enter the library as visitors or users is now about 750,000 a year, the daily average being about 2,000.

THE PRESS.

The total number of newspapers published in the world at present is estimated by statisticians at about 60,000. More than a third of these are in the United States. The American Newspaper Annual and Directory for 1916 gives the following figures: Daily, 2,494; triweekly, 73; semiweekly, 605; weekly, 16,091; fortnightly, 58; semi-monthly, 283; monthly, 3,064; bimonthly, 92; quarterly, 251; miscellaneous, 29; total, 23,024. It is only necessary to state these figures to indicate the significance of the press as a factor in education beyond school walls.

A proper use of the local press is a great help in local school matters. Some high schools conduct an educational column in the local papers, the material for which is prepared by members of the senior class, under the direction of the teacher of English. Some colleges, universities, and normal schools give a course in reporting for the home papers in the territory of their respective schools on matters of interest to the patrons of the institution, as well as to the institution itself. Some of these institutions also instruct their students who are preparing to teach how to use the local press to advance the work of their own schools locally and also give suggestions in the art of reporting for the State papers in order to promote the cause of education in the State at large. Many papers issue educational numbers once or twice each year which do much in promoting the cause of popular education throughout the country.

THE GENERAL FEDERATION OF WOMEN'S CLUBS.

The General Federation of Women's Clubs, with its 9,000 clubs, its 50 or more federations, and nearly 3,000,000 members, working through 12 to 15 departments, stands for better homes, better schools, better things for men, women, and children, and a broader vision of life. Among its departments are art, music, literature, civics, library extension, conservation of public health, social and industrial conditions, social hygiene, child hygiene, legislation, home economics, and education.

The department of education is one of the largest and most thoroughly organized divisions of the federation. It has four general committees: Peace, political science, vocational training and guidance, and rural schools. In the Southern States the most notable work is that of the school improvement associations. The club women of Texas gave their support to the bill passed by the last legislature of that State appropriating \$1,000,000 as a special fund to be expended in the improvement of the rural schools.

One of the most praiseworthy activities of the club women is the rural-welfare service. Many local club women in the towns are inviting the farm women to come to a "get-acquainted meeting," at which informal discussion of school and other problems is subordinated to visiting and general social enjoyment; then other meetings are held to which each farm woman brings as many of her neighbor women as she can; presently the rural women organize among themselves, as in Nebraska, North Carolina, and other States. Mrs. Claude D. Sullivan, director of the extension division of the Tennessee Federation of Women's Clubs, has had signal success in this work in that State. The education committee of the Maryland State Federation of Women's Clubs rendered the cause of education in-

estimable service in that State through the school improvement association during the year 1916.

At the New York meeting of the Federation resolutions were passed favoring a more rigid censorship of moving pictures, the teaching of domestic science in public schools, the Federal child-labor bill (now a law), and the Smith-Hughes vocational bill.

THE CHAUTAUQUA.

The Chautauqua has been described as the most American thing in America. Eminent foreigners who have written or spoken about America in recent years have recognized the Chautauqua as a potent factor in American life. During the Chautauqua season of 1916 over 3,000 assemblies were held and probably 5,000,000 people were reached through these agencies. Among the typical assemblies for their respective sections of the country are:

1. The parent Chautauqua: The parent Chautauqua, located at Chautauqua, N. Y., had, in the session of July 10 to August 18, 1916, 13 departments, with 125 instructors and 2,500 students enrolled. Chautauqua is the children's paradise. For over 40 years it has been America's greatest public forum. It is estimated that over 50,000 persons have completed its four-year reading circle course since its organization.

2. The Winona Lake Chautauqua: The assembly held at Winona Lake, Ind., is the largest and best-known institution of the Chautauqua movement excepting the parent assembly. The Winona assembly is under Presbyterian management, but it is interdenominational in its talent and conducts the largest summer Bible school in the world.

3. The Nebraska Epworth Assembly: The Nebraska Epworth assembly, located at Epworth Park, near Lincoln, Nebr., is under the management of the Methodist Episcopal Church, but is nonsectarian, its talent is interdenominational, and it includes those of Catholic and Protestant faith. It has probably reached at least 25,000 different people each season for the past 10 years, with an aggregate audience annually of over 100,000.

4. The Monteagle Assembly: The Monteagle assembly was organized in 1882 at Monteagle, on Cumberland Mountain, Tenn. It has the distinction of being the first summer school on a large scale in the Southern States. From the outset the assembly has included three divisions: (1) Sunday school and church work; (2) summer schools; (3) program of lectures and concerts for popular culture. It maintains the Chautauqua spirit by being interdenominational. The summer session at this institution for 1916 was one of the most successful in its history.

5. University Chautauquas: Twenty-one Chautauquas were conducted by the extension division of the University of Wisconsin during the season for 1915 and a still larger number for 1916. Each community pays the university \$1,000 for its program, for which the university sends to each community a large tent with platform, chairs, and electric lights; a small tent for housing educational exhibits; a canvas tent to inclose the two; a corps of four workers for six days, who give platform talks, conduct community round tables, lead the music, display educational motion pictures, tell the children stories and teach them games, and present two popular programs each day for six days,

each program preceded by a musical or literary prelude. Each community is amply supplied with advertising material. Every day in the week is filled by speakers and professional musicians, the Sunday program being especially adapted to the occasion.

THE SOUTHERN CONFERENCE FOR EDUCATION AND INDUSTRY.

The Southern Conference for Education and Industry grew out of the efforts of the southern people to solve special economic, social, and educational problems. The peculiar attainment of the conference has been to enlist citizens of all callings in the effort to develop an educational system in its entirety. The work of the conference includes three divisions, as follows, each directed by special committees:

- I. The Business Administration of the Educational System.
 1. Taxation and revenues.
 2. Apportionment and expenditures.
 3. Organization for administration: Boards, superintendents, supervisors, local trustees, administrative units, etc.
 4. The school plant—grounds, buildings, equipment.
- II. The Administration of Instruction.
 1. The course of study forming a continuing educational career for the individual from the elementary school on through the university, with stress on the human being, human activities, human relationships, rather than on subject matter.
 2. The extension activities of school and college, including physical, economic, and social development.
 3. Uniform standard for teachers, including the training of teachers through high schools, normal schools, and departments of education.
 4. The education of the Negro, with a study of the Negro mind to get at the means for adapting the school to his particular needs.
 5. The organization and management of the library—town, city, and especially of a county system.
- III. Community Life and Development.
 1. Vocational education, club work, and correlation of school with home, farm, and industry.
 2. The school as a social center, cooperating in a recreational program and other enterprises.
 3. The school as a factor in the industrial and economic system of the community.

The general sessions of the New Orleans meeting, April 16 to 20, 1916, were devoted to the following subjects: (1) The church in the country; (2) the cooperation of forces in extension work; (3) the organization of education and industry in a community; (4) a community conference on recreation, including the social center, the playground, special day celebrations, community music, discussions and debate, and the community fair.

THE SHAKESPEARE TERCENTENARY CELEBRATION.

The year 1916 marked a revival and extension of dramatic art through the tercentenary memorial celebrations of the death of William Shakespeare. Colleges, universities, and State normal schools, Shakespeare societies, and thousands of elementary and high schools participated in the celebrations during the spring and summer of 1916.

The most extensive and successful Shakespeare tercentenary celebration was that by New York City, under the direction of the New York City Shakespeare Tercentenary Celebration Committee, of which Miss Mary Porter Beegle was chairman, and Mrs. Axel O. Ihlseng was executive secretary. Among others active in the celebration were Mayor Mitchel, President Butler, of Columbia University, David Belasco, Daniel Frohman, and many other persons of like prominence. It was a city-wide celebration. Some of the forms which it included were as follows: Play, masque, festival, pageant, music, dancing, chorus, ballads, lecture, sermon, art and handicraft exhibit, library exhibit, club program, study course, story-telling, tableaux, tree planting, Shakespeare garden. Among the musicians who assisted were Mr. Stransky, of the Philharmonic, and Dr. Damrosch, of the New York Symphony, who in their final performances rendered music inspired by Shakespeare. There was great enthusiasm evident among organizations of many sorts—colleges, social settlements, churches, recreation centers, playgrounds, clubs, public schools, parochial schools, private schools, dancing schools, art schools, public school athletic league, gardens, Y. W. C. A.'s, Y. M. C. A.'s, Masonic lodges, continuation classes in department stores, and other kindred organizations and institutions.

This celebration began in the autumn of 1915 and extended into the month of May, 1916. It included many thousands of people of all nationalities and classes in all parts of the greater city and the territory adjacent. All of these celebrations led up to the Shakespeare masque, written for the occasion by Percy MacKaye and produced under his direction. The performances took place out-of-doors at night. In its purpose the masque was a communal effort to honor the poet by bodying forth some of the greatness of his art, and the art of the theater in its broadest sense. It was a symbolic drama setting forth the art of the theater in all ages and its power to purify and elevate the spirits of men. Its prologue, three acts, and epilogue were performed by eminent professional actors, and were separated by interludes in which community groups took part in pantomime, dance, and choral song. Magnificent pictures, gorgeous colors, the sweeping movements of the dance, supported by orchestral music, the multitudinous detail of costumes and properties combined to produce a type of drama hitherto undreamed of.

All the high schools of Washington, D. C., united in presenting one of the greatest Shakespearean pagents of this memorable year. The University of Virginia scored a signal success by its Shakespearean pagent which was staged on the beautiful and historic campus of this institution at the 1916 summer session in the presence of 1,500 teachers from many States and thousands of citizens of Virginia.¹

The Drama League of America.—The Drama League of America now in the seventh year of its work, with a membership of about 150,000, was founded on the belief, according to Richard Burton, its president in 1914, that the drama is fast becoming an appreciable and important part of American literature; that because of this coming of the drama once more into serious consideration the theater becomes an institution to be reckoned with as a cultural opportunity; that the right use of the playhouse will minister to civilization, if only the amusement it offers be rational, sound, and of value as art, and as an interpretation of life. Closely associated with the thought that the theater can and therefore should be an asset in national civilization, goes a democratic ideal, declares Mr. Burton, that the theater, in nature and origin, is a great people's institution, a kind of forum of the emotions of mankind; that it is the most widely appealing and influential of all the forms of story-telling and amusement; that its democracy inheres in these facts; and, hence, anything done to make it clean, artistically attractive, mentally and emotionally stimulating in the best sense, is directly a service to the public which attends the various offerings of the stage in almost innumerable numbers; that the stage is irresistible; therefore organize and reform the stage.

To this end the league has a program: It refuses to censure or attack bad plays; it damns only by silence, believing it is better and more effective to call attention to that which is good. This is done by the bulletin system, inaugurated in Chicago, the birthplace of the league, and now in familiar use in many of the large cities where branch organizations have been established. A playgoing committee selects from the offerings of a given week the drama it deems most worthwhile, and a bulletin, giving succinctly the facts about the play and urging its patronage, is sent out to all local members.

The extension service or circuit work of the league is explained by Martyn Johnson in *The Nation* of January 21, 1915. Briefly stated, it is as follows: The league sends at least three plays a year to the "one-night stands." This is made practicable by utilizing the idea of the lecture lyceum, securing an advance sale for a series of plays to be selected by the national playgoing committee. With an ad-

¹ A list of school and college celebrations of the Tercentenary is given in the bulletin of the Drama League, September, 1916.

vance sale of \$500 assured them the New York managers have been willing to book their first companies in such plays as have been chosen in a circuit of towns which otherwise would have no chance of witnessing plays of this class. Among the plays to be sent over the league circuit last season were: George Arliss's company in "Disraeli," Margaret Anglin's company in "Lady Windermere's Fan," and a special revival of "The Yellow Jacket." The revival of "The Yellow Jacket" was one of the most ambitious undertakings in the history of the league. The tour opened March 1, 1915, and extended from New York to North Dakota and Kansas, covering a period of two months, and was made possible by the work of the league in organizing audiences in each of the towns booked.

The league is self-supporting and refuses to put itself under any obligations to the managers of dramatic companies, even going to the extent of purchasing the tickets used by the playgoing committee.

Probably the greatest work ever done by the league was in the Nation-wide revival in Shakespearean study and dramatic art which it promoted through its "Suggestions for School and College Celebrations of the Tercentenary of Shakespeare's Death in 1916,"¹ as prepared by its president for 1915-16, Percival Chubb, with the collaboration of Miss Mary Porter Beegle, of Barnard College, New York, Miss Mary Wood Hinman, of the School of Dancing, Chicago, and Dr. William E. Bohn, of the Ethical Culture School, New York. At the request of the United States Commissioner of Education, the league had printed for the Bureau of Education a special edition of 35,000 copies of the booklet by this title, and these were distributed by the Bureau of Education among the elementary and high schools, as well as the colleges, universities, and normal schools of the United States. The Commissioner of Education, in an official letter, urged upon teachers, principals, and others throughout the country to assist in making this celebration an occasion for creating among the school children and the people generally a new interest in literature and the drama. In this letter, dated January 17, 1916, he suggested that special programs be devoted to the subject throughout the remainder of the 1915-16 school year and again after the schools opened in the fall of the school year 1916-17.

MOTION PICTURES.

Much has been written during the past five years both for and against the motion picture as a factor in the education of the people, but whether its influence be for good or evil, its position as a factor of importance in education remains unassailed. The ultimate result rests with the public. If the public desires a low grade of pictures

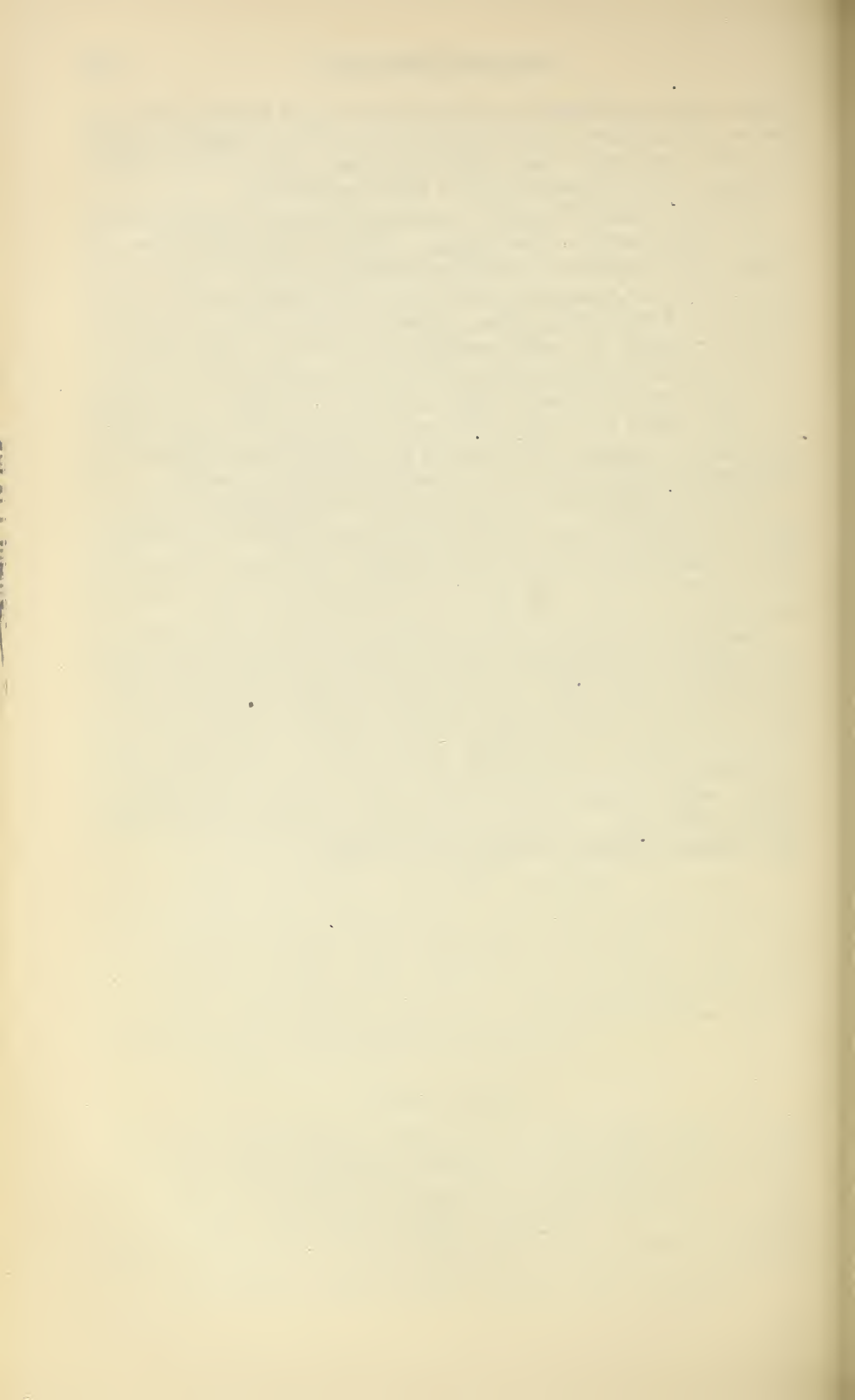
¹ Drama League of America, Marquette Building, Chicago, Ill., 10 cents.

to the extent of liberally patronizing them, the picture film companies will continue to manufacture a low grade of pictures; but if the public demands a high grade of pictures and will give liberal patronage, the film companies will meet the demand.

The University of Wisconsin is perhaps the pioneer among educational institutions in establishing a school film exchange as one means of solving the motion-picture problem. The division of visual education of the extension service in this institution has 130 reels of films and 18,000 lantern slides. There are 285 schools cooperating with the division in various sections of the State. Each school receives a set of 85 slides, and the 78 schools possessing motion-picture projectors receive a reel of film in addition. There is a weekly change of slides and films. The cost to each school is only about 30 cents for express. The circuit is so arranged as to facilitate the distribution of films in the most expeditious manner possible.

Recently attention has been directed to other problems in connection with motion pictures aside from moral and educational problems. There is the health problem—the problem of pure air; the problem of eye strain; the problem of overstimulation of the nervous organism.

That the motion picture can be put to a good use is evidenced by St. Bartholomew's Parish House and Grace Methodist Episcopal Church, both of New York City. Both of these churches show films on Sunday afternoon, giving pictures of travel through Palestine, Biblical scenes, and events in the history of the church. At Grace Church over 700 children are reported in attendance every Sunday afternoon at the motion-picture entertainments, with a total of over 50,000 admissions for 1916. A card from the Sunday school gives free admission; general admission without card is 3 cents.



CHAPTER XXIII.

LIBRARY ACTIVITIES.

By J. D. WOLCOTT,

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LIBRARY PUBLICITY.

In order to bring the reader and the book together, one of the chief functions of the modern public library, it is necessary to make known to the community the resources of the library and the services which it is prepared to render as a public institution. Library advertising is usually carried on by each individual library for itself, although some general uniformity in methods has been attained. Recently a tendency is manifest toward cooperation in the work of library publicity, both in local districts and in the country at large. It is found that by cooperative buying the expense to each library for the necessary publicity material may be materially reduced and that better talent may be employed for its production.

The American Library Association has given official attention to the subject of library publicity since 1906, when a committee on library publicity appointed by the association outlined a program for action. The committee has been renewed from time to time since that year, and has continued to study the problem. To the committee on publicity for 1916 the executive board of the American Library Association referred all previous American Library Association reports on the subject of publicity, and also instructed the committee to study out and report a comprehensive publicity plan for the American Library Association, the State library associations and commissions, and local libraries. The present committee, of which W. H. Kerr, of Emporia, Kans., is chairman, consists of eight members. Its report will be in the nature of a publicity survey. The committee plans to begin the publication of a quarterly, "American Library Press Bulletin," for the use of newspapers in all parts of the country.

The American Library Association, in conference at Asbury Park, June, 1916, sent a telegram of greeting to the Association of Advertising Clubs of the World, in convention in Philadelphia. A cordial

reply to this telegram was received and a good understanding established between the two organizations. The Associated Advertising Clubs had a committee on libraries as a subcommittee of their National educational committee. This committee, under the chairmanship of J. C. Dana, of Newark, N. J., worked actively and effectively to bring librarians into cooperation with the advertising men.

A movement for the employment by the American Library Association of a publicity expert for public libraries was recently started by the committee on publicity of the Pacific Northwest Library Association. Representative libraries in 20 States were urged to support the proposal, which was submitted to the American Library Association for consideration.

The conference on library work held by the Wisconsin library commission at Madison, Wis., in July, 1915, devoted one day of its program to the subject of publicity methods. The university school of journalism assisted in the presentation of the topic.

A number of libraries have been conspicuous for effective publicity work during the past year. The library committee of the Toledo (Ohio) Commerce Club designated the period of seven days beginning March 1, 1916, as a library publicity week, during which the uses of the public library should be brought in every practicable way to the general notice of the citizens. The undertaking was officially recognized by proclamation of the mayor of Toledo. During the week articles and advertisements about the library appeared each day in the local newspapers. Appropriate cards and other library material were displayed in show windows in various parts of the city, and the street cars carried posters relating to the library. Similar posters were placed in many of the large factories. Other methods of advertising employed were the distribution of folders and the inclosure of slips regarding the library in 10,000 laundry packages. After listening to library talks at the schools, the pupils were taken on visits to the public library and its resources explained to them. A result of the campaign has been a marked increase in the number of registered borrowers and of books lent from the public library.

A similar campaign for the establishment of a business department in the public library was carried on in St. Paul in June, 1915, by the Town Criers, an association of local advertising men. On June 17, which was recognized by proclamation of the mayor as Town Criers' library day, a special library edition of the St. Paul Daily News was issued and circulated. In July a business men's library centrally located in a store was opened to the public by the city library, and means have since been taken by the Town Criers and other organizations of business men to bring the services of this library to the attention of those interested.

Other cities in which noteworthy publicity work has recently been accomplished by the public libraries are Seattle, Wash., St. Joseph, Mo., and Utica, N. Y.

In Wisconsin during the past year public library books were frequently advertised through window displays. This method of publicity was first tried by the larger libraries of the State and is now being adopted by those of the smaller communities. For the most part, merchants' windows on the main streets are borrowed for this purpose, since few libraries have suitable windows in their own buildings. It is reported that these window displays bring good results when made by libraries.¹

LIBRARY SURVEYS.

Most of the reports of school surveys recently published devote little or no space to the library as an educational factor. In surveys now in progress there are, however, indications of a tendency to give more attention to public and school libraries.

Recent examples of surveys recognizing the work of libraries are the report of the Ohio State school survey commission, 1914, which has 7½ pages on the subject of "What public libraries do for schools"; also the school surveys of South Bend, Ind.; Springfield, Ill.; Leavenworth, Kans.; and San Antonio, Tex., which deal briefly with the status of high-school libraries and with the relations of the public library to the schools in their respective communities.

The report of the examination of the public-school system of the city of Buffalo by the education department of the State of New York, Albany, 1916 (pp. 79-80), commends the working of the system by which the Buffalo public library supplies books for the pupils of the graded schools. It views as one of the greatest advantages of the system that the children are constantly reminded "that the books come from a source which is available after the children have passed through the schools and that the public library is a means of education which is open to them during their life in the city." The collections of historical reference books in the Buffalo high-school libraries also receive favorable mention in the report (p. 137).

One section of the report of the education survey of Cleveland, conducted by the survey committee of the Cleveland Foundation in 1915, deals with the relations of the public library and the public schools.² Although this report has to do primarily with conditions in Cleveland, much of its contents will be found informing and suggestive for other cities. The opening chapter contains an historical

¹ Library window displays in Wisconsin, by Julia C. Stockett. Wisconsin Library Bulletin, 12: 246-248, June, 1916. Plate.

² "The Public Library and the Public Schools," by Leonard P. Ayres and Adele McKinzie. Cleveland, Ohio, 1916. 93 p. Illus.

sketch of the always close connection in Cleveland between the public library and the public schools. The attainment of still more effective forms of cooperation is stated to be the aim of the present report. The field of operations is then surveyed under its various divisions of libraries in elementary schools, branch libraries, classroom and home libraries, high-school libraries, and the normal-school library. The final chapter is a forecast of future development, with recommendations of policies and administrative readjustments tending to the highest efficiency.

The principal conclusion reached by this study of the library and the schools is that "in their relations to each other both schools and libraries should subordinate every other consideration to the single aim of implanting in every child an invincible love for reading." To accomplish this end the children must be introduced at an early age to a great variety of well-chosen books and encouraged in every possible way to read them. This conclusion is based on the principle that reading is the most important thing the child can learn in school.

The survey recommends that the library board advise with the board of education as to the possibility of erecting new branch libraries in connection with public school buildings. In this way one auditorium, one heating plant, one set of clubrooms, and one custodian would serve for both institutions. The following recommendations are also presented: The establishment of a school library in each new school building reorganized on the platoon plan or any similar plan; well-equipped libraries and trained librarians for all junior high schools; expansion of the book collections of senior high schools so as to include works of inspiration and recreation as well as reference books. To meet the proposed extensions, it is asserted, the number of school librarians in Cleveland may well be increased to approximately 50 in the near future.

The salaries paid to school librarians are found insufficient to encourage any young woman in Cleveland to enter such work. The average of training and education among school librarians is higher than it is among the teachers of the public schools, but the salaries received by librarians are much lower than those of teachers—less than half the average high-school teacher's salary, in the case of high-school librarians. The survey declares that school librarians should be at least as well paid as are the teachers among whom they work. This is desirable both in the interest of justice and of efficiency, in order that the librarians may be accepted by the teachers as their professional equals.

The survey recommends the establishment of a corps of teacher librarians, certified by the library board as librarians, by the board of education as teachers, paid by both boards, and appointed to their positions by the board of education. A supervisor of school libraries

should also be appointed in charge of all library work with the public schools.

A comprehensive survey of all State-supported library activities in Washington is to be undertaken in accordance with a decision of the library advisory board of that State, reached January 21, 1916, and unanimously approved by the State library commission. The State library advisory board consists of John B. Kaiser, Tacoma, president; James M. Hitt, State librarian ex officio, secretary; Mrs. Josephine Preston, State superintendent of public instruction; and three other members. The survey is to be under the direction of the members of the advisory board as chairmen of special committees. Experts in various lines will be invited to assist in the study. It is expected that the work will require a year or more, and the board will report the results to the commission. The survey is to cost only the expenses of the board members.

The following subjects will come within the scope of the survey:

The State library—is a legislative reference division desirable for the State library?

Is a library organizer needed in the State?

What aids can be rendered small town libraries?

Traveling library department—can the advisory board help develop it?

How can further cooperation between existing libraries and the public schools be fostered to the advantage of both?

Can the county school circulating libraries be aided?

The problem of instruction in normal schools in the use of libraries and a knowledge of children's literature.

The county library question.

Can and should the State aid the libraries in the State charitable, penal, and reformatory institutions?

What should be the relation of the State university library to the other libraries maintained by the State?

Is a summer library school desirable under the auspices of the State library commission or the State university?

How can the extension department of the State university aid in the solution of the State's library problems?

What legislation, if any, is recommended by the advisory board?

Work with foreigners.

Henry E. Legler, librarian of the Chicago Public Library, is chairman of a committee of 11 appointed by the Illinois Library Association to make a survey of library conditions in the State of Illinois. The work is divided among public, rural school, high school, normal school, college, and university libraries. Special attention is to be given to furnishing a constructive policy for high-school libraries.

ADMINISTRATION OF HIGH-SCHOOL LIBRARIES.

One problem regarding high-school libraries which is under consideration at present is whether control of these libraries by the

school authorities alone is preferable, or whether such control should be shared between the public-library board and the school board.¹ The former system is more prevalent, but there is a strong movement in favor of the latter plan, which naturally enlists the support of public-library workers, who desire to be recognized as the professional coworkers of teachers in the educational field. It may be said at present that the question of form of high-school library control depends upon local conditions. No general plan has yet been formulated which can claim to be universally applicable. It is generally recognized, of course, that cooperation between the public library and school libraries is desirable, but this is often attained without placing the school libraries under a system of joint administration.

Some school men seem to believe that the school authorities alone can so administer the library as to correlate it intelligently with the other activities of the school. It is also asserted that the problems of the high-school library resemble those of libraries of colleges and of other educational institutions, rather than those of the public library; and that administration by the school authorities affords an opportunity to manage and develop the high-school library along the lines of libraries of educational institutions. Another advantage is that, since the school board is usually able to pay the high-school librarian a teacher's salary, with rank as a faculty member, it can set higher qualifications for the librarian than can the public library, which can rarely offer an adequate salary.

When the high-school library is a branch of the public library, it is sometimes open to the public at large as well as to the students, but the majority of such branches are closed to the public. There is strong objection to opening the school library to the public, on the ground that with a divided constituency the library becomes less serviceable to the pupils. The following reasons are given for reserving the school library exclusively for the school: (1) In order to preserve the atmosphere of the schoolroom, and proper discipline; (2) selection of books must be made with the pupils in view rather than the public, who require a collection of a character different from that which the school requires; (3) the school needs the whole time of the librarian, who can not be spared from her school duties in order to give attention to the public. If a public-library branch in

¹ This question was discussed at the meeting of the library department of the National Education Association, at New York, July 3, 1916. A statement of points on both sides may be found in the report of the committee on high-school libraries of the library department in the Proceedings of the National Education Association for 1915, pp. 1068-69. See also "The High-School Library," by Gilbert O. Ward (Chicago, American Library Association publishing board, 1915), pp. 17-20. In an article entitled "The Efficient High-School Library," Emma J. Breck opposes the plan of combining school and public service in the same library (English Journal, 5: 12-13, January, 1916). The side of public-library supervision is presented in the Library Journal by the following authors: Harriet A. Wood, 39: 659-62, September, 1914; Elizabeth White, 41: 524-26, July, 1916; Bessie Sargeant Smith, 41: 639-41, September, 1916; Arthur E. Bostwick, 41: 646-47, September, 1916.

a high-school building is open to the public, the students should have a separate reading room, and the adult patrons should not be allowed to interrupt the close relations demanded between librarian and pupils.

On the other hand, the advocates of the affiliation of school and public libraries point out that the majority of high-school students will never enter college, and conclude from this that the college library is not the model which the high-school library should follow. They say that the mass of students should become acquainted with the public library, so that they may be encouraged to use it in continuing their education after leaving the high school. When there is an organic connection between the public library and the school library the entire resources of the former are better available to the school and a ready interchange of books between the two libraries may be effected. The public library also will have many contemporary pamphlets and pictures to turn over to the high-school library, which are valuable for its use.

It is claimed that the public library, by reason of its experience and equipment, can purchase books and supplies more economically than can the school board. The public library is also more likely to secure the latest and best editions of books desired. Under public-library management the cataloging of school libraries is done at the central library, thus insuring uniformity of method and leaving the school librarian free for the direct assistance of pupils. The central library may also be called upon to take an inventory of the school library, prepare new books, attend to binding, bring other work up to date, or provide a substitute for the school librarian during her temporary absence.

The high-school librarian, when provided by the public library, may be expected to have some technical skill and breadth of education. She will probably be a member of the public-library staff, and in that case is qualified by her experience to draw upon the resources of the central library to aid in school work. Such a librarian can bring the school faculty and the public-library staff into cooperation, especially if she attends both faculty and staff meetings.

The division of responsibility and expense for the high-school library between the public library and the school board varies in different places. In Cleveland, Ohio, which may be taken as a typical example, the board of education supplies the library room with its furnishings, light, heat, janitor service, reference books, and some magazines. The public library selects the librarian and pays her salary; also that of any library assistants and pages needed. It buys the books for circulation, part of the magazines, all supplies, and carries on the administration of the libraries.

The arrangement between the school and the public library may require the former to furnish certain kinds of books, such as reference

works, or to contribute a definite amount for the public library to spend for books; the school board may appoint the librarian on the recommendation of the public librarian, and the public library supply the books. It may naturally be arranged that the school shall purchase all sets of books used for supplementary reading and books permanently assigned to classrooms, such as dictionaries. In other respects, to require the public library to supply circulating books, and the school to supply reference books, is likely to cause difficulty, since it is often hard to foresee which use a given book will have.

The total number of cities in the United States now reporting public-library branches in high schools is 16, located in 14 different States, comprising a total of 32 branch libraries, as follows: Stamford, Conn.—High School; Chicago, Ill.—Austin, Carter Harrison, Lake View, and Nicholas Senn High Schools; Gary, Ind.—High School; Louisville, Ky.—Boys' High School, Girls' High School; Lynn, Mass.—Lincoln School; Somerville, Mass.—High School; Grand Rapids, Mich.—South High School; Kansas City, Mo.—Central, Northeast, and Westport High Schools; Omaha, Nebr.—High School; Passaic, N. J.—High School; Cleveland, Ohio—Central, East, East Technical, Glenville, Lincoln, South, West, and West Technical High Schools; Portland, Oreg.—Jefferson, Lincoln, and Washington High Schools; Salem, Oreg.—High School; Pawtucket, R. I.—High School; Tacoma, Wash.—Lincoln Park High School, Stadium High School; Madison, Wis.—High School.

PROGRESS IN HIGH-SCHOOL LIBRARIES.

The movement for better high-school libraries made steady advances during the past year throughout the country. The following are some special features of importance in the progress recently accomplished:

California.—A certificate from the California State Board of Education is now required of all high-school librarians. Applicants for special certificates must show that they have had at least four years' instruction beyond that required for graduation from a high school maintaining a four years' course in advance of the eighth grade, or an equivalent amount of training; that at least half of said four years' instruction has been devoted to study of work in library craft, technique, and use, or to subjects strictly supplementary thereto; that at least two-fifths of a year has been devoted to pedagogical subjects suited to the training of a secondary-school teacher, including practice teaching. Special work in library craft during the secondary period may be substituted at the rate of half time for similar study in the collegiate period, providing it does not exceed half the total time required in library craft. One year of successful

teaching may be substituted for half of the pedagogical work, and two years for the entire pedagogical requirements. The State board of education may accept certain equivalents for any of the above requirements, each application being considered on its own merits.

Connecticut.—In the will of the late Edward Hallen, former judge of probate and member of the board of education, \$500 was left to the city of Bridgeport to be used as a fund for a memorial, and it is suggested that this fund be used to establish a Hallen collection in the new high-school library.

Kentucky.—Libraries have been established in the boys' high school and girls' high school of Louisville, which will be conducted as high-school branches of the Louisville Free Public Library under joint control of the board of education and the library board. The librarians who have been appointed were chosen from the staff of the public library, and have also been elected members of the school faculties.

Louisiana.—In accordance with a plan of the principal to build up the library of the Sophie B. Wright high school in New Orleans, the girls of the three classes have elected members of a library board. This board is to look after the interests of the school library, and also to collect 1 cent per week from each of the 830 girls. The money collected in this way will be used to buy new books.

Minnesota.—The annual report on high schools of the State supervisor of school libraries shows that library service is rendered by teachers in 113 schools, by superintendent or high-school principal in 18, by normal training department in 4, students in 13, superintendent's clerk in 9, and school librarians in 25. Of the latter, 10 give full time to the school library. Sixteen schools depend upon the public library for all but classroom reference books, and three have definite contracts with the public library for service. Eighty-two schools attempt to give some public-library service, and three house the books belonging to the public-library association. South High School, Minneapolis, maintains a deposit station of the public library, and Hastings and St. Louis Park have combination school and public libraries, jointly supported by the town and the school.

Nebraska.—At the opening of the school year, September, 1915, the Omaha Public Library opened its first high-school branch. The agreement provides that the board of education shall supply the library room, properly furnished, pay the salary of the librarian, and purchase all strictly reference books, and that the library board shall purchase books for circulation and attend to all the details of cataloging and preparing the books for the shelves, also to the transportation of books to and from the school.

New York.—According to the report of the committee on school libraries of the New York Library Club, the most important event

this past year in the development of school libraries in New York City has been the introduction of an elective course of 20 lessons in library methods for teachers in the Brooklyn Training School for Teachers. Thirty-five students elected the course during the year, and it proved so valuable to them in their work that a much larger class is expected for next year. The aim of the course is to prepare teachers for the efficient use of libraries and library tools in their school work.

The school libraries division of the New York State education department and the New York State Library School cooperated in conducting a library institute for high-school librarians, July 6-16, 1915. The entire time of the institute was devoted to the reference use of the high-school library. The intelligent interest of the teachers in attendance made it possible to obtain results far exceeding the expectations of those who had planned the course. The number of registrations for the course was 34, representing all parts of the State.

Ohio.—The Scott High School library of Toledo was opened for student and faculty use in November, 1915. There are 3,000 books on the shelves, of which 2,500 are new. Most of the funds for purchasing books were cleared in a post-card campaign, during which more than 28,000 post-card pictures of the building were sold by students and faculty at 5 cents apiece. Other sources of income were the receipts from a lecture and from the annual French play, and various donations. By the united effort of student body and faculty \$2,600 for the library was raised in a single year.

Rhode Island.—A bill was introduced in the legislature during its 1916 session to promote the efficiency of library service, providing State aid for payment of school librarians whose qualifications are approved by the State board of education.

Utah.—The State board of education is collecting a model school library, from the first grade to the last year of high school, which is to be housed in the State library at the capitol. The books will be available for loan to educators of the State.

COOPERATION BY SPECIALIZATION.

The American Library Institute, under the lead of its president, E. C. Richardson, librarian of Princeton University, has indorsed a proposition that certain libraries shall definitely adopt certain specialties and engage to undertake one or all of the following matters:

1. To build up in these lines.
2. To prepare and publish a joint list of each specialty adopted.
3. To prepare or secure printed cards of all books in these lines which are likely to be found in many libraries and which are not to be had in the Library of Congress or other published cards.

4. To analyze and publish a cumulated, short-title catalogue of all books in the collection which call for analysis.

5. To be responsible for either—

(a) Lending to other libraries, or

(b) Indicating on request some library from which copy can be borrowed, or

(c) In case of unique works, or works so rare as to forbid any lending copies, to provide or secure photostat copies for lending.

6. To be responsible for having typewritten or photostat extracts made from these books, and, when practicable, for having researches made in the subject, for reasonable compensation, according to the sponsorship idea of the special librarians.

7. To be responsible for an effort to organize the libraries having like specialties so as to secure that there shall be at least one reference copy and one lending copy (either original or copy) of all books on the subject in each of seven localities of the United States.

The headquarters office of the American Library Association at Chicago, Ill., has become a clearing house for those libraries and individuals which have expressed a willingness to be enrolled as authorities for information on certain topics, in accordance with the "sponsorship for knowledge" idea recently proposed by George W. Lee, librarian of Stone & Webster, Boston, Mass. The plan briefly expressed is this:

Let libraries, institutions, librarians, and others register with a central bureau any specific topic upon which those persons or institutions are particularly well qualified to furnish expert information; let the list of these sponsored topics be published and distributed widely; let additions be made and the cumulated list replenished from time to time; let it be understood that seekers after knowledge in the particular fields covered may communicate with sponsors on those subjects, either directly or through their local library.

A number of libraries and individuals have already enrolled as sponsors for certain topics in accordance with this scheme.

BOOK WAGONS.

The use of book wagons, or rather automobiles, for the service of rural readers, is spreading into new territory through its adoption from time to time by additional libraries. Wherever this method is introduced, reports indicate that it is found an effective means for stimulating an interest in books among the rural population and for supplying the desires thus aroused.

About 10 years ago the Washington County Free Library, at Hagerstown, Md., put a book wagon into operation on routes in that county. In 1912 an automobile was purchased in place of the original horse-drawn vehicle, and since that date this automobile has continued to make trips with great success.

For some years past, the Connecticut Public Library committee has maintained a book wagon. The value of this service is proved by the eagerness of the patrons for its continuance, and by the high

standard of books circulated. The appropriation available for this purpose has been inadequate to meet the demand for the service.

The State Library Commission of Delaware maintains book wagons which deliver books from house to house on country routes in Kent and Sussex Counties. This work, begun in the fall of 1912, has received such appreciation from the people of the districts reached as to show that a real need is met in this way. In actual operation, books to the number of 75 or more are placed in a wagon or automobile in charge of an agent familiar with books, who also studies the tastes and needs of the people served. The patrons may select books on their own initiative, or on advice of the librarian in charge. The main purpose of these book wagons is to inspire a love of good books and to broaden the outlook of the readers. The book circulation is increasing, but the appropriation is inadequate to make more than a beginning in the work.¹

The Narragansett Library, of Peace Dale, R. I., began during the year an educational missionary work in South Kingstown, by means of a book automobile. Homes of patrons in the country were to be used as deposit stations, and a house-to-house canvass of the districts to be covered was planned.

The Plainfield (Ind.) Public Library has prepared a "book automobile," to be used for all its rural service. The library serves two townships, and a personal touch will now be given to its work for the rural community.

A playground wagon has been evolved by the St. Louis Public Library, for use in cooperation with the summer playgrounds. It is a motor truck, carrying within a bookcase on wheels, with a capacity for 380 volumes. These books are lent to the children at the playgrounds.²

NEW LIBRARY BUILDINGS.

The corner stone of the new Central Public Library building in Indianapolis, Ind., which is to cost over \$500,000, was laid March 24, 1916, with appropriate exercises. The program was largely in honor of James Whitcomb Riley, who donated the site for the building. It is reported that sentiment is growing in favor of naming the building after Mr. Riley. A fund was recently raised by contributions from the school children for equipping the building with massive bronze doors.

A site for a library building has been donated by a public-spirited citizen to the city of Wilmington, Del. In April, 1916, over \$325,000

¹ The story of a book wagon, by Mary Holland Burchenal, member of Delaware State Library Commission. 12 pp.

² Library Journal, 41: 653-54, September, 1916. Front.

was raised by subscription for the erection of the new building on this site.

St. Paul, Minn., has a new library building which is approaching completion, provided by J. J. Hill for housing both the public library and his gift of a reference library. San Francisco and Detroit have new library buildings well under way. Savannah, Ga., is also to have a new public library building.

An appropriation of \$350,000 has been made for the construction of a new library building at the University of Michigan. The capacity of the new structure will be 600,000 volumes, with reading rooms to accommodate 1,000 students.

The new library building of the University of Missouri was opened in January, 1916. Amherst College also is to have a new library building, with a capacity of 240,000 volumes.

The faculty and alumni of the University of Alabama have indorsed a plan to raise funds by popular subscription for the erection of a library building, to be called the Amelia Gorgas Memorial Library, in memory of Mrs. Amelia Gorgas, who for many years was university librarian.

MEETINGS OF ASSOCIATIONS.

AMERICAN LIBRARY ASSOCIATION.

The conference of 1916, marking the fortieth anniversary of the American Library Association, was held at Asbury Park, N. J., June 26 to July 1. The attendance reached nearly 1,500, the largest yet recorded at any meeting of the association. The general theme of the program was the library in a democracy.

In the absence of the president, Mary W. Plummer, of New York, whose attendance was prevented by illness, the first vice president, Walter L. Brown, of Buffalo, N. Y., and the second vice president, Chalmers Hadley, of Denver, Colo., acted in turn as presiding officers. Miss Plummer's presidential address, entitled "The public library and the pursuit of truth," was read by George B. Utley, secretary of the association. Some important papers presented at the general sessions were the following: "How the community educates itself," Arthur E. Bostwick; "Children's reading," John Jay Chapman, read by Henry N. Sanborn; "Democracy in modern fiction," Mary Ogden White; "Leadership through learning," W. W. Bishop; "Modern drama as an expression of democracy," Robert Gilbert Welsh; "The new poetry and democracy," Jessie B. Rittenhouse; "How Ontario manages her free libraries," E. A. Hardy.

The American Library Association was organized in October, 1876, at a meeting held in Philadelphia in accordance with a plan origi-

nated by Melvil Dewey, R. R. Bowker, and Frederick Leypoldt. On the occasion of the fortieth anniversary of its founding, the association showed its appreciation of the services of these three men by the presentation of a loving cup to Mr. Bowker, and by sending telegrams of greeting to Mr. Dewey and to the widow of Mr. Leypoldt. Telegrams of greeting were also sent to 14 other persons known to be surviving from the 67 charter members of the association.

Besides the five general sessions, interesting and suggestive meetings were held by the various sections of the association and by the several affiliated organizations. Three of these sections are distinctly educational in character—the professional training section, the college and reference section and the school libraries section.

The school libraries section held two sessions, which were well attended. The papers and discussions centered about the national campaign for better school libraries. C. C. Certain, of the Cass Technical High School, Detroit, Mich., presented "The school library situation in the South," giving data obtained by tabulating the replies to the questionnaire sent to high-school libraries in 16 Southern States by the Bureau of Education early in 1916. A paper by James F. Hosic, of the Chicago Normal College, on "The place of the school library in modern education," was read in the author's absence by W. H. Kerr. The remainder of the meeting was a symposium on the subject: How can we promote the school library movement? The participants were Azariah S. Root, Oberlin College; Henry E. Legler, Chicago Public Library; Effie L. Power, Carnegie Library, Pittsburgh; and Orpha M. Peters, Public Library, Gary, Ind. At the second session of the section, after a general discussion of various subjects, round tables were held for high-school librarians and for normal-school librarians, respectively.

An instructive exhibit illustrating the equipment and work of representative school libraries was on view during the conference. It consisted of scrapbooks, pictures, plans, charts, and pamphlets.

On Thursday afternoon of the conference week about 650 librarians visited Princeton University by special train, where they were welcomed by President Hibben and shown through the buildings and grounds, with particular attention to the university library.

NATIONAL EDUCATION ASSOCIATION, LIBRARY DEPARTMENT.

During the meeting of the National Education Association in New York City, July 1-8, the library department of the association held three regular sessions and one joint meeting with the department of secondary education. Irene Warren, of Chicago, Ill., presided over the regular sessions.

The topic of the first meeting was the administration of the high-school library. The combined administration of high-school libraries by the public-library and public-school boards, as in operation in Cleveland, Ohio, was described by Bessie Sargeant Smith, supervisor of high-school libraries of that city, who pointed out the advantages of the plan. Arthur E. Bostwick, librarian of the public library, St. Louis, Mo., then took up the general principles involved, supporting the control of school libraries by the public library on the ground of efficiency, but disclaiming for the public library any desire to direct educational policy. In the discussion which followed, the point of view of the public library was further developed by Henry E. Legler, librarian of the Chicago Public Library. Purd B. Wright also commented on the system of branch libraries in high schools in Kansas City, Mo. The opposite position, that school libraries should be administered by the school authorities, was supported by Sherman Williams, chief of the school libraries division, New York State education department. William B. Owen, principal of the Chicago Normal College, then spoke on the importance of the early formation of the "library habit" by young people. In this connection, Sherman Williams expressed the belief that the reading habit, if it is to be effective, must be acquired before the high-school age, perhaps even before the age of 10.

O. S. Rice, supervisor of school libraries, Wisconsin, announced that a teacher-librarian course would be offered by the University of Wisconsin in the autumn of 1916, under the auspices of the State department of education.

At the second session of the library department reports were made on recent progress in normal-school libraries, high-school libraries, and rural-school libraries. The topic of the third session was "Source material," the subject being introduced by May Massees, of Chicago, editor of the A. L. A. Book List.

The joint meeting of the department of secondary education and of the library department was held Wednesday forenoon. "The importance of the library in the modern high school" was presented by William M. Davidson, superintendent of schools, Pittsburgh, Pa. Other papers were "The need of an aggressive campaign for better high-school libraries," by Charles Hughes Johnston, University of Illinois; "The value of the library to vocational and technical courses in high schools," by Walter D. Hood, principal of the Gilbert School, Winsted, Conn.; "The administration and maintenance of the high-school library," by Mary Sullivan, Pittsburgh, Pa.; report of library committee, by its chairman, C. C. Certain, Cass Technical High School, Detroit, Mich. The program ended with a symposium on the uses of the library in the teaching of various subjects in the high-school curriculum.

In the Washington Irving High School, where the joint meeting took place, there was a comprehensive exhibit illustrating the work of a modern organized high-school library. The main library room of the high-school and the library classroom adjoining contained collections of books and other library aids for the different school courses, grouped according to subject, thus showing clearly and effectively the assistance which the library offers to students in each branch. Another room contained material illustrating plans and equipment for standard high-school libraries.

An exhibit of library aids for teachers, prepared by a local New York City committee of the National Education Association, was placed in the children's room of the New York Public Library, where it attracted much attention. The children's room itself, with its books and equipment, was an interesting and suggestive exhibit for teachers in elementary schools.

CHAPTER XXIV.

EDUCATIONAL WORK OF AMERICAN MUSEUMS.

By PAUL MARSHALL REA,

Secretary of the American Association of Museums; Director of the Charleston (S. C.) Museum.

INTRODUCTION.

For the purpose of obtaining more complete and accurate statistics regarding the educational work of museums in the United States, a special questionnaire was issued by the Commissioner of Education in May, 1916. The returns from this questionnaire have made possible a revision of the list of museums and their directors in the Educational Directory for 1916-17,¹ in addition to yielding the general information which forms the basis of this chapter.

Returns were received from 281 museums. Those which did not make returns, with a few exceptions, are small and inactive. Organized educational work is reported by 51 museums. In addition, 8 museums which failed to make returns are known to conduct active educational work. The reasons for the relatively small number of museums engaged in organized educational work have been presented fully in previous reports.² The significant fact is the success of this work wherever it is being done and the increase in its extent during the past 10 years.

Of the 51 museums reporting organized educational work, 38 are public museums, i. e., they receive their financial support from the people in the form of appropriations of tax funds or in memberships, or in both of these ways. Not only do the public museums engage in educational work more frequently than any other class of museums, but they develop it much more extensively than others. Broad educational service thus appears to be the significant product of this type of museum. There is evidence, however, of an increasing tendency for other types of museums to follow the lead of the public museums. Three museums of a private nature—that is, maintained exclusively by endowments derived from one or two donors only—

¹ See Bulletin, 1916, No. 43.

² Rep. of Commis. Educ., 1913, Vol. I, ch. 13, pp. 299-305. Ibid, 1914, Vol. I, ch. 23, p. 497.

are engaged in educational work. One of these owes its distinction chiefly to good fortune in obtaining curators who have appreciated the educational work of the public museums. The other two are recently organized museums, which likewise are inspired by the example of the public museums.

As to college museums, which have been discussed at length in previous reports, no accurate estimate can be made of educational service. Some certainly are used extensively in college and university instruction, but it is equally certain that many are not closely related to the work of the colleges to which they belong. Reports showing some effort to extend educational facilities to public schools or to the general public have been received from 10 college or university museums. In no case is this work extensive; yet it indicates the influence of the newer idea of museum service.

The position of college museums is best understood when it is remembered that, like all other institutions, museums owe their primary obligation to the sources of their funds. The college museum is a college problem, and its status just at present is uncertain. It has definite teaching functions as administered at Harvard, Yale, Clark University, University of Chicago, etc. For this purpose it is a development of the illustrative teaching collections usually found in college departments. The point at which these teaching collections acquire sufficient distinction to be termed "museums" is difficult to determine, as is also the extent to which it is advisable for a college or university to develop museums as adjuncts of courses of instruction.

A second and important function of the college museum is to afford material for research. Neither the teaching nor the research function, however, brings the college museum into any direct relation with the public or with elementary or secondary schools. College museums of natural history usually fail to appeal to the general public for lack of expert installation. The expense of such installation is of doubtful expediency unless the welfare of the college can be enhanced proportionately by it. The University of Iowa finds its large group exhibits of value in attracting public interest to the university. Perhaps the most promising field of public instruction for college museums, however, is in connection with university extension.

STATISTICS OF EDUCATIONAL WORK.

The following statistics are compiled from information received this year. Further description of the work of many of these museums can be found in previous reports. The names of a few museums are included which did not make returns this year, but which are known to maintain extensive educational work, references being given to previous reports containing notices of their work.

CALIFORNIA

Southwest Museum, Los Angeles. Founded in 1907. Maintained exclusively by memberships and contributions. Attendance in 1915, 6,000. Lectures in 1915 in the museum, 37. Extension lectures in 1915 on archeology, art, and nature study to schools, clubs, and societies, 72. Staff docents, 2. Volunteer docents, 6. Exhibits sent to 15 schools, serving 2,400 pupils. Field instruction in 1915 in archeology and natural history, 2 trips. Free laboratory facilities to high-school students and adults.

Oakland Public Museum, Oakland. Founded in 1907. Maintained exclusively by the city. Attendance in 1915, 64,602. Lectures in 1915 in the museum, 50. Extension lectures in 1915 on fine arts, natural history, and California history, 25; total attendance, 2,200. Staff docents, 1. Traveling exhibits in 1915, 86 loans to 75 schools. Field instruction in 1915, 48 botanical trips; average number participating, 20.

Memorial Museum, San Francisco. Founded in 1895. Maintained exclusively by the city. Attendance in 1915, 750,261 (in 1905, 413,140). Extension lectures in 1915 to elementary and high schools, 260 (in 1905, none); total attendance, 50,000. Traveling exhibits sent in 1915 to 107 schools (in 1905 to 5 schools); number of pupils served in 1915, 6,000 (in 1905, 50). It is part of the work of the teachers of the public schools to bring classes to the museum for general instruction.

ILLINOIS.

Art Institute, Chicago. Founded in 1879. Maintained by endowment, city appropriation, memberships, admission fees, etc. Attendance in 1915, 1,019,225 (in 1905, 670,809). Lectures, concerts, etc., in the museum in 1915, 417; total attendance, 141,273. Extension lectures in 1915, 30; total attendance, 10,000. Staff docents, 2. Volunteer docents, 6. Number of lessons, 608; total persons served, 12,367. Pictures are lent to the schools through the Public School Art Society. A 16-page popular bulletin has been published eight times a year since 1907; average circulation, 8,500.

Chicago Academy of Sciences, Chicago. No report received this year. (See Rep. Commis. Educ., 1915, Vol. I, ch. 22, p. 545.)

Chicago Historical Society, Chicago. No report received this year. (See Rep. Commis. Educ., 1915, Vol. I, ch. 22, p. 554.)

Educational Museum, University of Chicago. About 10,000 articles are sent from the museum to the various schoolrooms and instructors for illustrating class work.

Field Museum of Natural History, Chicago. No report received this year. (See Rep. Commis. Educ., 1914, Vol. I, ch. 23, pp. 504-505.)

Illinois State Museum of Natural History, Springfield. Founded in 1878. Maintained exclusively by the State. Attendance in 1915, 70,000 (in 1905, 30,000). Lectures in 1915 in the museum, 20 (in 1905, none); total attendance, 8,000. Extension lectures in 1915 on natural history, 12 (in 1905, none); total attendance, 1,500. Volunteer docents on special occasions, 5.

INDIANA.

Museum of Fine Arts, University of Indiana, Bloomington. Founded in 1896. Maintained by the university. Traveling exhibits of pictures are sent throughout the State as a part of the work of the extension division of the university.

John Herron Art Institute, Indianapolis. Maintained by endowment, appropriation from the school board, memberships, contributions, etc. Attendance in 1915, 35,756. Lectures in 1915 in the museum, 211 (in 1905, none). Extension

lectures in 1915, 7 (in 1905, none); total attendance, 2,500. Regular weekly lectures for grade-school and high-school pupils are given on definitely arranged programs. A great many photographs and mounted pictures are loaned to clubs, schools, etc.

Northern Indiana Historical Society, South Bend. Founded in 1896. Maintained exclusively by memberships. Lectures in 1915 in the museum, 9. Pupils of all city and parochial schools are required to visit the museum with their teachers.

IOWA.

Davenport Academy of Sciences, Davenport. No report received this year. (See Rep. Commis. Educ., 1913, Vol. I, ch. 13, p. 306.)

LOUISIANA.

Louisiana State Museum, New Orleans. Founded in 1906. Maintained jointly by State and city funds. Attendance in 1915, 113,400. Lectures in 1915 in the museum, 17; total attendance, 1,500. Traveling exhibits in 1915, 25; number of schools served, 50; number of pupils served, 5,000.

MASSACHUSETTS.

Children's Museum of Boston. Founded in 1913. Maintained exclusively by memberships and contributions. Attendance in 1915, 64,014. Lectures in 1915 in the museum, 368; total attendance, 13,371. Extension lectures in 1915 on the subject of children's museums given before women's clubs, church societies, teachers, and librarians, 8; total attendance, 700. Field instruction in 1915 for the study of birds, trees, and insects, 39 trips; total number participating, about 1,000. An eight-page popular bulletin has been issued five times a year since January, 1915; average circulation, 200.

Museum of Fine Arts, Boston. Founded in 1870. Maintained by endowment, memberships, subscriptions, admission fees, etc. Attendance in 1915, 267,211 (in 1905, 249,239). Lectures in 1915 in the museum, 497; total attendance, 13,747. Extension lectures in 1915, 36. Staff docents, 24. Volunteer docents, 3. Number of parties served, 303; number of persons served, 4,213. The museum loaned 6,610 photographs to 185 classes outside the museum. Two members of the staff and two volunteers have given 108 story hours for children, with an average attendance of 60. A popular eight-page bulletin has been published six times a year since 1903, with an average circulation of 4,200.

Old South Association, Boston. Founded in 1876. Maintained by endowment, admission fees, sale of publications, etc. Attendance in 1915, 7,144 (in 1905, 14,053). Lectures in 1915 in the museum, 20 (in 1905, 10). The association provided facilities for a university extension course on the economic and historical geography of Boston, attended by 70 teachers. In connection with this course regular field trips were taken. The association conducts celebrations on holidays of historical significance, gives prizes for historical essays by pupils graduating from the Boston high schools and high schools outside of Boston, and provides children's-hour lectures for pupils of the upper elementary grades. Lectures are also given for adults, the attendance at four of these being 809, including 221 teachers. In connection with these lectures 170 teachers and children were taken by automobile to Concord, the objects and places of historic interest being described on the way. The association has given 40 lectures on American history and American institutions, especially for the benefit of immigrants. The attendance at these lectures was 4,318. In connection with the extension work of the public schools the association has pro-

vided lectures in foreign languages, followed by conferences for the purpose of preparing foreigners for citizenship.

Fogg Art Museum, Harvard University, Cambridge. Founded in 1895. Maintained by endowment, university funds, memberships, etc. In addition to its work in connection with university courses, the museum circulates among the high schools of Massachusetts three sets of lantern slides on Greek, Roman, and English history, which were used by 46 schools in 1915.

Museum of Natural History, Springfield. No report received this year. (See Rep. Commis. Educ., 1915, Vol. I, ch. 22, p. 543.)

Barnum Museum, Tufts College. Founded in 1883. Maintained by endowment and by college funds. Attendance in 1915, 10,000 (in 1905, 5,000). Lectures in 1915 in the museum, 15 (in 1905, 5); total attendance in 1915, 500 (in 1905, 250). Extension lectures in 1915 on scientific subjects to churches, schools, etc., 18 (in 1905, 6); total attendance in 1915, 3,000 (in 1905, 1,000).

Educational Museum, Clark University, Worcester. Founded in 1911. Maintained by the university. Exhibits were lent 700 times in 1915 to 10 schools, where they were used by about 1,700 pupils.

Worcester Art Museum, Worcester. Founded in 1896. Maintained by endowment, memberships, contribution, etc. Attendance in 1915, 37,827 (in 1905, 23,958). Lectures in 1915 in the museum, 68 (in 1905, 5); total attendance in 1915, 3,740 (in 1905, 250). Exhibits lent in 1915 to schools, 12; number of schools served, 60. Staff docents, 2. Since 1909 story hours have been provided for children. In 1915 three members of the staff told stories on 29 Saturdays to an average attendance of 54 children. The museum publishes a popular bulletin of 18-24 pages four times a year. This bulletin was started in 1910 and has an average circulation of 1,000.

Worcester Natural History Museum, Worcester. Maintained by endowment, memberships, contributions, etc. Attendance in 1915, 4,362 (in 1905, 6,160). Lectures in 1915 in the museum, 65 (in 1905, 50). There were lent to teachers in the public schools 564 specimens in 1915. Field instruction in 1915 in natural history, 16 trips (in 1905, 3 trips).

MICHIGAN.

Hood Museum, Alma College, Alma. Founded 1887. Maintained by the college. Attendance in 1915, 500. Two volunteers gave 10 story hours for children in 1915; average attendance, 20. Field instruction in 1915 in natural history, 10 trips; average number participating, 10.

Detroit Museum of Art, Detroit. Founded in 1886. Maintained by endowment, city appropriation, memberships, etc. Attendance in 1915, 160,000. Lectures in 1915 in the museum, 75. Staff docents, 4. One member of staff gave story hours for children; average attendance, 50. The museum has published a 12-16 page popular bulletin eight times a year since 1904; average circulation, 2,000.

Kent Scientific Museum, Grand Rapids. Founded in 1902. Maintained exclusively by the city. Attendance in 1915, 39,000 (in 1905, 40,000). Lectures in 1915 to schools in the museum, 22 (in 1905, 36). Extension lectures, chiefly on bird conservation, in 1915, 17. In 1915, 64 traveling exhibits were circulated regularly among the public schools. In addition, a large number of single specimens and mounted pictures were lent to the schools on demand.

Michigan Pioneer and Historical Museum, Lansing. Founded in 1903. Maintained by the Michigan Historical Commission. Attendance in 1915, 5,000 (in 1905, 3,000). Extension lectures in 1915 on Michigan history given by the curator, 136.

MINNESOTA.

St. Paul Institute Museum, St. Paul. Founded in 1909. Maintained jointly by the city and St. Paul Institute. Attendance in 1915, 5,306. Lectures in 1915 on natural science to school children in the museum, 10; total attendance, 800. Staff docents, 2. Volunteer docents, 2. The St. Paul Institute publishes a popular bulletin including news of the museum; six issues a year; average circulation, 1,500.

MISSOURI.

Geological Museum, Missouri School of Mines, Rolla. Maintained by the school. Has deposited 40 mineral and rock collections in high schools of Missouri.

Educational Museum, St. Louis. Founded in 1904. Maintained by the board of education. Total number of traveling exhibits in 1915, 10,000. Number exclusive of duplicates, 2,000. Number of loans made, 57,573. Number of schools served, 128. Number of pupils served, 100,000.

NEBRASKA.

Hastings College Museum, Hastings. Founded in 1912. Maintained by contributions and by the college. Attendance in 1915, 2,000. Lectures in 1915 in the museum, 25; total attendance, 500. Volunteer docents, 2; number of parties served, 25. Exhibits are deposited with schools for the term of one year or for indefinite periods. One member of the staff gave 25 story hours for children; average attendance, 50. This work was begun in 1914.

Nebraska State Museum, Lincoln. Founded in 1892. Maintained by the State university. Attendance in 1915, 50,000 (in 1905, 2,500). Lectures in 1915 in the museum, 25; total attendance, 4,000. Extension lectures in 1915, 10; total attendance, 1,000. The extension lectures were on natural history subjects and were given before women's clubs, commercial clubs, engineering societies, etc.

NEW JERSEY.

Newark Museum Association, Newark. Founded in 1909. Maintained by city appropriation, memberships, contributions, etc. Attendance in 1915, 101,002. Staff docents, 4. Volunteer docents, 15. Number of parties served, 400. Number of persons served, 6,000. Number of traveling exhibits in 1915, 926. Number of loans made, 2,778. Number of schools served, 130. Number of pupils served, 5,200.

NEW YORK.

Children's Museum, Brooklyn. Founded in 1899. Maintained by city appropriation, by the Brooklyn Institute of Arts and Sciences, by contributions, etc. Attendance in 1915, 185,764 (in 1905, 94,480). Lectures in 1915 in the museum, 312 (in 1905, 214); total attendance in 1915, 29,340 (in 1905, 14,727). Extension lectures in 1915 on the work of the museum, 7; total attendance, 1,500. Staff docents, 1. Traveling exhibits in 1915, 1,398. Number of schools served, 60. Number of pupils served, 140,000. Since 1913 the museum has published an eight-page popular bulletin eight times a year.

Buffalo Society of Natural Sciences, Buffalo. Founded in 1861. Maintained by endowment, city appropriation, memberships, etc. Lectures in 1915 for grammar-school pupils in the museum, 330; total attendance, 30,000. Extension lectures in 1915, 28; total attendance, 25,000. Total number of traveling exhibits in 1915, 60. Number exclusive of duplicates, 35. Number of schools served, 62.

Arnot Art Gallery, Elmira. Founded in 1911. Maintained by endowment. Attendance in 1915, 14,251. The sixth, seventh, and eighth grades of the public schools, the vocational school, and the eighth grade of the parochial school visited the gallery twice in 1915 and were given talks by the director; total attendance, 2,400.

Public Museum, Staten Island Association of Arts and Sciences, New Brighton. Founded in 1881. Maintained by endowment, city appropriation, and the Staten Association of Arts and Sciences. Attendance in 1915, 13,263. Lectures in 1915 to children in the museum, 20; total attendance, 2,037. Extension lectures in 1915 on scientific subjects, 17; total attendance, 2,500. Field instruction in 1915 in natural history, 5; average number participating, 15. A four-page popular bulletin has been published twelve times a year since 1908.

American Museum of Natural History, New York City. Founded in 1869. Maintained by endowment, city appropriation, memberships, contributions, etc. Attendance in 1915, 920,008 (in 1905, 565,489). Lectures in 1915 in the museum, 157 (in 1905, 148); total attendance in 1915, 125,949 (in 1905, 96,000). Extension lectures in 1915, 39; total attendance, 36,300. The extension lectures are a repetition of the lectures given in the museum and are for the benefit of public-school children who are too poor to pay car fare to come to the museum. Staff docents, 2. Total number of traveling exhibits in 1915, 671 (in 1905, 400). Number exclusive of duplicates in 1915, 18 (in 1905, 13). Number of schools served in 1915, 473 (in 1905, 200). Number of pupils served in 1915, 1,238,581 (in 1905, 375,000). The museum publishes a popular bulletin; eight issues per year; 64 pages per issue; begun in 1900; average circulation, 4,600.

Metropolitan Museum of Art, New York City. No report received this year. (See Rep. Commis. Educ., 1915, Vol. I, ch. 22, p. 548.)

New York Botanical Garden, New York City. Founded in 1895. Maintained by endowment, city appropriation, memberships, subscriptions, etc. (For educational work see Rep. Commis. Educ., 1915, Vol. I, ch. 22, p. 541.)

Memorial Art Gallery, Rochester. Founded in 1913. Maintained by memberships and contributions, etc. Attendance in 1915, 41,006. Lectures in 1915 in the museum, 16. The director gave talks to classes from the public schools by appointment; also a gallery talk in connection with each exhibition. The gallery lends photographs to schools for a limited time.

NORTH CAROLINA.

North Carolina Hall of History, Raleigh. Founded in 1902. Maintained by State appropriation solely. Attendance in 1915, 60,000 (in 1905, 36,000). Lectures in 1915 in the museum, 30 (in 1905, none); total attendance, 3,000. Extension lectures in 1905 on historical subjects, chiefly before schools, 60 (in 1905, none); total attendance, 4,500.

OHIO.

Cincinnati Museum, Cincinnati. Founded in 1881. Maintained by endowment, memberships, contributions, admission fees, etc. Total attendance in 1915, 53,143 (in 1905, 35,933). Lectures in the museum in 1915, 28. Extension lectures in 1915, 40; total attendance, about 4,000. These lectures, chiefly on art subjects, are given in schools, churches, societies, factories, etc. Docent service was given to 18 parties, comprising 754 persons. Two traveling exhibits were lent to 5 schools in 1915.

Museum of the Society of Natural History, Cincinnati. Founded in 1877. Maintained by endowment and by memberships and contributions. Attendance in 1915, 950 (in 1905, 1,000). Lectures in 1915 in the museum, 20. Total

number of traveling exhibits in 1915, 20. Number exclusive of duplicates, 10. Number of schools served, 56. These figures were the same in 1905.

Cleveland Museum of Art, Cleveland. Founded in 1913. Maintained exclusively by endowment. The new building of this museum not being completed until 1916, the educational work is only just beginning. In 1915, 25 extension lectures were given to 1,000 people. These lectures were for the most part descriptive of museums and their work and were intended to stimulate interest in the Cleveland museum. Six traveling exhibits were lent seven times to schools and libraries. A popular bulletin of 8-16 pages has been issued four times a year since 1913; average circulation, 2,000.

Toledo Museum of Art, Toledo. Founded in 1901. Maintained almost exclusively from memberships. Attendance in 1915, 150,000 (in 1905, 25,000). Lectures in the museum, 60 (in 1905, 20); total attendance in 1915, 15,000 (in 1905, 2,500). Extension lectures in 1915, 110; total attendance, 35,000. Many of the extension lectures were on landscape gardening, city beautifying, and bird conservation. Staff docents, 1; volunteer docents, 12. One member of the staff and three volunteers gave 104 story hours for children in 1915; average attendance, 100. Field instruction, mostly in connection with bird conservation, in 1915, 200 trips. A 16-page popular bulletin has been published six times a year since 1902; average circulation, 2,500.

PENNSYLVANIA.

Pennsylvania State Museum, Harrisburg. Founded in 1905. Maintained by State appropriation solely. A large collection of lantern slides, most of them colored, is lent in groups of 50 or more.

Independence Hall National Museum. Founded in 1876. Maintained by city appropriation, etc. Attendance in 1915, 458,076. Lectures in 1915 in the museum, 185; total attendance, 12,000. Staff docents, 2. Number of parties served, 46; number of persons served, 1,800. The museum began the publication of an 8-page popular bulletin in 1914.

The Philadelphia Museums, Philadelphia. Founded in 1894. Maintained by the State, the city, memberships, and contributions. Lectures in 1915 in the museum to the general public, 30; to schools, 225 (in 1905, none); total attendance, 50,000. The lectures to schools are under 55 different titles on industrial, commercial, and geographical subjects and are illustrated by colored lantern slides and motion pictures. These lectures are given daily through the school year. After each lecture the classes are divided into small parties and sent with guides to study the exhibits. Free lectures for the general public are given every Saturday afternoon during the winter. Extension lectures on commercial and industrial subjects are given before schools, business men, chambers of commerce, etc. Typewritten lectures accompanied by lantern slides, lanterns, and screens, and frequently by illustrative exhibits as well, are lent free of cost to public schools throughout Pennsylvania for a week or more at a time. There are 16 different lectures in circulation and others in preparation. Staff docents, 5; number of parties served, about 1,000; number of persons served, about 25,000. The museum does not lend traveling exhibits, but under State appropriation more than 3,000 exhibits illustrating geography, commerce, and industry have been prepared and distributed to schools throughout the State, where they are studied annually by not less than 250,000 pupils. There are six standard series of these collections adapted for the various school grades. The larger collections comprise over 600 specimens, including photographs illustrating production, manufacture, and transportation.

University Museum, University of Pennsylvania, Philadelphia. Founded in

1889. Maintained by endowment, State appropriation, memberships, contributions, etc. Attendance in 1915, 57,792 (in 1905, 38,654). Lectures in 1915 in the museum, 29 (in 1905, 15); total attendance in 1915, 16,676 (in 1905, 1,891). Three members of the staff gave 19 story hours for children in 1915; average attendance, 250. Since 1910 the museum has published a 64-page popular-bulletin four times a year; average circulation, 1,000.

Reading Public Museum and Art Gallery, Reading. Founded in 1911. Maintained by city appropriation, school district, and contributions. Attendance in 1915, 33,000. Lectures in 1915, to schools, 20; to the general public, 10; total attendance, 22,000. Extension lectures in 1915, 10; total attendance, 9,000. Staff docents, 4. Total number of traveling exhibits in 1915, 100. Number of schools served, 150. Number of pupils served, 15,000.

Everhart Museum of Natural History, Science, and Art, Scranton. Founded in 1908. Maintained by endowment and city appropriation. Attendance in 1915, about 60,000. Lectures in 1915 in the museum, 9; total attendance, 325. Extension lectures in 1915, 27; total attendance, about 4,500. Exhibits were lent to five schools in 1915. Field instruction in 1915, 8 trips; average number participating, 45.

RHODE ISLAND.

Park Museum, Providence. Founded in 1894. Maintained exclusively by the city. Attendance in 1915, 85,000. Lectures in 1915 in the museum, 87; total attendance, 9,407. Extension lectures in 1915, 114; total attendance, 24,882. The extension lectures include a regular course of three lectures per year to every grammar school in the city. Other lectures on scientific subjects are given to private schools, parents' and teachers' associations, women's clubs, men's clubs, etc. Two members of the staff and two volunteers gave 24 story hours for children in 1915; average attendance, 55. Total number of traveling exhibits in 1915, 150. Number, exclusive of duplicates, 110. Number of loans made, 133. Number of schools served, 36. Number of pupils served, 7,282. Field instruction in 1915, 29 trips for bird and tree study; total attendance, 393. Since March, 1909, a four-page popular bulletin has been published six times a year; average circulation, 1,000.

Rhode Island School of Design, Providence. Founded in 1877. The museum is maintained by endowment and by the School of Design. Attendance in 1915, 75,555. Staff docents, 1. Volunteer docents, 14. Total persons served, 2,063 school children, plus 800 persons at Sunday docent services. An eight-page popular bulletin has been published four times a year since 1913.

SOUTH CAROLINA.

The Charleston Museum, Charleston. Founded in 1773. Maintained by endowment, city appropriation, memberships, contributions, etc. Attendance in 1915, 18,529 (in 1905, about 8,000). Lectures in 1915 in the museum, 33 (in 1905, 5); total attendance, in 1915, 674 (in 1905, about 100). Extension lectures, in 1915, 11 (in 1905, none); total attendance, 600. Staff docents, 1. Number of parties served, 29. Number of persons served, 560. Total number of traveling exhibits, in 1915, 63. Number exclusive of duplicates, 59. Number of loans made, 1,357. Number of schools served, 23. Number of pupils served, 4,000. One member of the staff gave 14 story hours for children. Field instruction, in 1915, 14 trips (in 1905, 4 trips); average number participating, in 1915, 20 (in 1905, 6). The museum has published since 1905 an eight-page popular bulletin eight times a year, average circulation, 400.

TEXAS.

Dallas Art Association, Dallas. Founded in 1907. Maintained by memberships and contributions. Lectures in 1915 in the museum, 7. Two annual exhibitions of school children's work were held in 1915. The museum organized in 1915 a junior league with 80 children as members.

VERMONT.

Fairbanks Museum of Natural Science, St. Johnsbury. Founded in 1891. Maintained exclusively by endowment. Lectures in 1915 in the museum, 170. Extension lectures are given to 11 rural schools, comprising 150 students. Staff docents, 3. Number of traveling exhibits in 1915, 40. Number of schools served, 10. Number of pupils served, 1,000. Field instruction in 1915, 74 trips. Number of persons participating, 11-20.

WISCONSIN.

State Historical Museum, Madison. Founded in 1854. Maintained solely by the State Historical Society of Wisconsin. Number of lectures in the museum in 1915, 12 (in 1905, none). Extension lectures, in 1915, 12 (in 1905, none). Instruction was given to 1,019 pupils in 42 classes from public and high schools, and to 281 students in 15 classes from the University of Wisconsin. Field instruction in archeology and history in 1915, 5 trips; average number participating, 350.

Milwaukee Public Museum, Milwaukee. No report received this year. (For account of educational work, see Proc. Amer. Assoc. Mus., VIII, 1914, pp. 60-64.)

GENERAL CONSIDERATIONS.

The educational work of the museums listed above is, in the aggregate, impressive in variety and extent and remarkable for the rapidity of its development. In 1905 only three of these museums were doing conspicuous work of this character, while eight others had made small beginnings.

There is every prospect that this first decade is but the prelude to a permanent service of increasing magnitude and that this service will be more and more widely appreciated. Two methods of accelerating this development seem desirable. The first is more serious consideration of museums and their work by school authorities and educators generally. The second is organized publicity to make more widely known to people throughout the country the nature and value of the service rendered by public museums.

A step toward the fulfillment of the first need was taken in connection with the New York meeting of the National Education Association in July, 1916, when a special session was held at the Metropolitan Museum of Art for consideration of the educational value of museums. At the meeting of the science section, also, in the American Museum of Natural History, a paper on "The value and importance of the school museum" was read by Mr. C. G. Rathmann, director of the Educational Museum in St. Louis. In this paper Mr.

Rathmann described not only the work of a school museum, but its place in the educational system. Emphasizing the necessity of supplementing the textbook with object teaching, he showed the value of the museum in making children acquainted with the world in which they live. It is not the purpose of the museum to illustrate every part and feature in geography, history, nature study, and other subjects, he said. This is neither necessary nor desirable. What is necessary is to give the children vivid and concrete images in order to enable them to form adequate images of things and processes not illustrated. The use of illustrative material is a means to this end. The child must be led from the concrete to the abstract, but there must be sufficient concrete experience from which to make abstractions.

The possibilities of museums in illustrating and supplementing school work were especially well presented in a series of papers read at the Washington meeting of the American Association of Museums in May, 1916.¹ These papers were part of a symposium reporting further progress in a concerted experiment of a number of museums in illustrating the history of nations and of civilization. The first symposium on this subject was reviewed in a previous report.² Not the least interesting feature of this work is that it has been conducted by both museum and school instructors. Closer cooperation between museum and school authorities must inevitably prove mutually advantageous in this field.

¹ See Proc. Am. Assoc. Mus., X, 1916, pp. 34-52.

² Rep. of Commis. Educ., 1914, Vol. 1, ch. 23, pp. 498-501.

CHAPTER XXV.

EDUCATIONAL WORK OF THE CHURCHES.

For several years past the Annual Report of the Commissioner of Education has contained a section on the educational work of the churches.¹ The present chapter is not intended to be a complete statement; it is intended rather to present brief notes of the work for the year of certain typical denominations, especially with respect to elementary schools. It is noteworthy that more attention has recently been given by churches to educational work than in previous years. It is not merely that the volume of work has increased; the denominations are examining carefully the work of the institutions in their charge; they are in many instances raising standards and placing the entire work of church education on a sounder basis. Characteristic of the spirit of investigation in church educational work is the scholarly volume on "Church Ideals in Education," presented to the 1916 convention of the Protestant Episcopal Church. The following titles of the various sections of the report will indicate its scope: General policies; Parochial education in the church; Secondary education in the church; Collegiate education in the church; Theological education in the church; Education in the province; Education in the diocese; Education in the parish; Financing education; Special features in religious education.

Of special interest in church education is the work of the Council of Church Boards of Education. At a meeting of the council held January 19-21 at Chicago, an interdenominational campaign was inaugurated. A temporary secretary to conduct the campaign was selected. The work to be done by the interdenominational campaign for the year 1916 was set forth as follows:

1. The immediate objective is twofold: (1) To gather facts with which to impress the fundamental importance of Christian education, and (2) to use such facts as a means of impressing upon selected communities the importance of Christian education as a means of demonstrating the wise and effective method of impressing these facts upon the people. These two lines of activity should be carried forward at the same time, work in both directions proceeding at once.

Your committee recommends that the effort to impress the fundamental importance of Christian education shall be understood to include: (1) Christian education through denominational schools and colleges, (2) religious work at State universities, (3) religious education through the home and local church

¹ See Report, 1913, pp. 343-413; 1914, pp. 597-618; 1915, pp. 559-581.

organizations, and (4) religious instruction in independent schools and colleges and in public schools.

2. The temporary secretary shall gather from the various boards and agencies and other sources such facts as are available and put them into form as printed matter, charts, pictures, and lantern slides. He shall also proceed to gather facts through surveys and investigations.

3. The temporary secretary shall arrange for at least three demonstrations in three cities to be chosen later by the campaign committee. By means of exhibits and addresses the facts calculated to interest those present in the whole cause of Christian education shall be presented and such follow-up methods adopted as shall seem desirable for the purpose of spreading interest and information.

Denominational schools for Negroes have received special attention in the report of the Bureau of Education on Negro education, published in cooperation with the Phelps-Stokes Fund.¹

In previous reports the Lutheran schools have had large space. The Lutheran Churches have recently decided, however, to issue their statistics every three years, instead of every year; it is therefore impossible to present a review of the Lutheran work until more direct means of acquiring statistics can be found. Prof. W. H. T. Dau, of Concordia Seminary, St. Louis, who has in the past generously prepared a statement for the bureau, has been unable to do so this year because of the change in the method in publishing statistics.

ROMAN CATHOLIC PARISH SCHOOLS.

By Rev. Patrick J. McCormick, Associate Professor of Education, Catholic University of America, Washington, D. C.

The statistics for the Catholic parish schools in 1915-16 show a gain of 100 schools and 41,743 pupils, when compared with the figures for the preceding year. In 1914-15 a gain of 85 schools and 26,347 pupils was recorded. The large increase in total registration during 1915-16 is partly accounted for by the fact that the Ruthenian-Greek schools have supplied their registration figures for this year, whereas in 1914-15 they were not recorded. Their schools remain the same in number, but the registration of 10,966 pupils makes an increase in the total registration which is out of proportion to that in the number of schools.

With the exception of the academies for girls, which increased five in number, the parish schools were the only institutions in the Catholic system to increase in number during the year reported. The Catholic population, which is 16,564,109, showed an increase of 254,709 over that of 1914-15.

The Catholic University of America, which has been affiliating high schools and academies since 1912, added 43 new high schools to its accredited list during 1915-16. There are now 132 high schools accredited, and many of these are parish high schools. An idea of

¹ Bulletin, 1916, Nos. 33 and 39.

the significance and extent of this standardizing movement may be given by the distribution of these schools according to States, which is as follows: Alabama, 1; California, 3; Colorado 2; Connecticut, 3; Florida, 2; Georgia, 2; Illinois, 6; Indiana, 1; Iowa, 13; Kansas, 1; Kentucky, 5; Maryland, 1; Massachusetts, 5; Michigan, 2; Minnesota, 2; Missouri, 10; Nebraska, 2; New Jersey, 1; New York, 3; Ohio, 21; Oklahoma, 1; Oregon, 2; Pennsylvania, 19; Tennessee, 2; Texas, 10; Virginia, 1; Washington, 3; Wisconsin, 8.

The list of administrative and supervisory officers remains nearly the same as that of last year. Diocesan school boards are mentioned in the reports of some few dioceses for the first time. The Rev. Ralph Hunt, S. T. L., has been appointed superintendent of schools for the archdiocese of San Francisco, and the Rev. William F. Lawlor has been appointed assistant superintendent of schools for the diocese of Newark, N. J.

During the year an increased activity has been noted in providing extension and summer courses for teachers. A larger number of religious communities have conducted their own summer schools. The diocese of Albany inaugurated a summer school for primary teachers. In the diocese of Cleveland and in the archdioceses of San Francisco and Oregon City large teachers' institutes were held during the summer vacation. Summer schools were also conducted under university auspices by De Paul University, Chicago, Ill.; Marquette University, Milwaukee Wis.; Creighton University, Omaha, Nebr.; and the Catholic University of America, Washington, D. C. In the last-named there was a total registration of 600; 320 attending at Washington, and 280 at Dubuque, the western extension. This enrollment represented 31 religious communities, 28 States, and 43 dioceses of the United States and Canada.

Tables 1 and 2 are based on data supplied by the Official Catholic Directory, published annually by P. J. Kennedy & Sons, New York City.

TABLE 1.—*Diocesan school boards and supervising officers.*

[Archdioceses are indicated by an asterisk (*).]

Ecclesiastical province.	Diocese or archdiocese.	Title of governing board and number of members.	Name and title of supervising officer.
Baltimore.....	*Baltimore	Examiners of teachers (2).....	Rev. Lawrence Brown, superintendent (Baltimore City).
		Examiners of schools:	
		For Baltimore (4).....	
		For Washington (4).....	
		For rural districts (4).....	
	Richmond.....	Examiners of schools:	
		Northern and western district (2)	
		Southern and eastern district (2)	
	Wheeling.....	Examiners of schools:	
		3 district boards (1, 2, and 2).....	
	Wilmington.....	School board (4).....	

TABLE 1.—*Diocesan school boards and supervising officers*—Continued.

Ecclesiastical province.	Diocese or archdiocese.	Title of governing board and number of members.	Name and title of supervising officer.
Boston.....	*Boston	Rev. Augustine F. Hickey, S. T. L., supervisor of schools.
	Burlington.....	School board (3).....	Rev. W. J. Fitzgerald, S. T. L., diocesan supervisor of schools.
	Fall River.....	Diocesan school visitors (2).....	
	Hartford.....	.....
	Portland.....	School visitors (4).....	Rev. John F. Conlin, P. R., diocesan school visitor; Rev. P. F. Doyle, assistant diocesan school visitor.
	Providence.....	Examiners of teachers (3)..... Examiners of schools (8)..... School board (13).....	
	Springfield.....	.....
Chicago.....	Alton.....	Diocesan school board (6).....	Rev. John P. Curran, superintendents of schools.
	Belleville.....	Diocesan school board (7).....	
	* Chicago.....	Diocesan school board (13).....	
	Rockford.....	School board: 3 district boards (6, 6, and 4).....	
Cincinnati.....	Columbus.....	School board (5).....	Rev. A. E. Lafontaine, superintendent of schools. Rev. William A. Kane, superintendent.
	Detroit.....	Examiners of teachers (6)..... School board: 6 district boards (17, 17, 4, 3, 3, and 4).....	
	Fort Wayne.....	Diocesan school board (9).....	
	Cleveland.....	Rev. L. J. Harrington, school examiner. Rev. J. B. O'Leary, diocesan director of schools. Rev. Thomas V. Tobin, superintendent.
	Grand Rapids.....	School board (6).....	
	Louisville.....	School board (10).....	
Dubuque.....	Nashville.....	Examiners of teachers and diocesan school board (7).....	Rev. L. J. Kavanagh, superintendent. Rev. Joseph A. Dunne, inspector of schools. Rev. Joseph V. S. McClancy, inspector of schools.
	Toledo.....	School board (7).....	
	Davenport.....	School board: 5 district boards (2, 2, 2, 2, and 2).....	
	Lincoln.....	Diocesan school board (5).....	Rev. Edmund F. Gibbons, superintendent of parochial schools. Rev. John A. Dillon, superintendent of schools; Rev. William F. Lawlor, assistant superintendent of schools. Rev. Joseph F. Smith and Rev. Michael J. Larkin, superintendent of schools.
	Omaha.....	Diocesan examiners of teachers (2)..... Diocesan school board (12)..... 7 local school boards.....	
	Sioux City.....	Diocesan school board (6).....	
Milwaukee.....	Green Bay.....	Diocesan school board (3).....	Rev. L. J. Kavanagh, superintendent. Rev. Joseph A. Dunne, inspector of schools. Rev. Joseph V. S. McClancy, inspector of schools.
	La Crosse.....	School board (7).....	
	Marquette.....	School commission (6).....	
	*Milwaukee.....	Diocesan school board (8).....	
New Orleans.....	Superior.....	School commission (4).....	Rev. L. J. Kavanagh, superintendent. Rev. Joseph A. Dunne, inspector of schools. Rev. Joseph V. S. McClancy, inspector of schools.
	Dallas.....	.....
	Galveston.....	Diocesan school board (3).....	
	Little Rock.....	Diocesan school board (7).....	
New York.....	Mobile.....	Diocesan school board (6).....	Rev. L. J. Kavanagh, superintendent. Rev. Joseph A. Dunne, inspector of schools. Rev. Joseph V. S. McClancy, inspector of schools.
	*New Orleans.....	Catholic board of education (15) (10 ecclesiastics, 5 laymen).....	
	Albany.....	Diocesan school board (11).....	
	Brooklyn.....	Kings County school board (21).....	Rev. Edmund F. Gibbons, superintendent of parochial schools. Rev. John A. Dillon, superintendent of schools; Rev. William F. Lawlor, assistant superintendent of schools. Rev. Joseph F. Smith and Rev. Michael J. Larkin, superintendent of schools.
	.....	Queens County school board (5)..... Nassau County school board (4)..... Suffolk County school board (4).....
	Buffalo.....	Diocesan school board (7).....	
	Newark.....	School board (18).....	Rev. Edmund F. Gibbons, superintendent of parochial schools. Rev. John A. Dillon, superintendent of schools; Rev. William F. Lawlor, assistant superintendent of schools. Rev. Joseph F. Smith and Rev. Michael J. Larkin, superintendent of schools.
	*New York.....	New York City and Yonkers school board (23).....	
	.....	Westchester County school board (5)..... Orange and Rockland Counties school board (5)..... Ulster and Sullivan Counties school board (4)..... Putnam and Dutchess Counties school board (5).....
	

TABLE 1.—*Diocesan school boards and supervising officers—Continued.*

Ecclesiastical province.	Diocese or archdiocese.	Title of governing board and number of members.	Name and title of supervising officer.
New York.....	Ogdensburg..... Rochester..... Syracuse..... Trenton.....	School board (7)..... School board (2)..... School board (7)..... Examiners of teachers (3).....	Rev. William J. McConnel, superintendent of paro- chial schools.
Oregon.....	*Oregon City.....	Diocesan school board (19)..... Diocesan school board (6).....	Rev. Edwin V. O'Hara, diocesan superintendent of schools.
Philadelphia.....	Erie..... Harrisburg..... *Philadelphia.....	 School board (12)..... Diocesan school board (11).....	Rev. John M. Gannon, D. D., D. C. L., superintendent of schools. Right Rev. Mgr. P. R. Mc- Devitt, superintendent of parochial schools; Rev. John E. Flood, assistant superintendent.
	Pittsburgh.....	Examiners of school teachers (11).. Diocesan school board (28)..... Diocesan school board (3).....	Rev. H. C. Boyle, superin- tendent of schools.
Ruthenian- Greek. St. Louis.....	Concordia..... Kansas City..... Leavenworth..... *St. Louis.....	Diocesan school board (5)..... Diocesan school board (6)..... Diocesan school board (9)..... Diocesan high-school board (3)..... Diocesan school board (13).....	 Rev. A. V. Garthoeffner, superintendent of schools.
St. Paul.....	Wichita..... Bismarck..... Crookston..... Duluth..... Fargo.....	Diocesan school board (4)..... Parochial school board (5)..... School board (9)..... School board (11).....	 Rev. Hugo Tell, O. S. B., diocesan superintendent of schools.
	St. Cloud..... *St. Paul..... Sioux Falls..... Winona.....	Diocesan school board (5)..... School board (6)..... Diocesan school board (6)..... School board (7).....	Very Rev. J. Baker, V. G., inspector of schools.
San Francisco..	Monterey-Los An- geles. *San Francisco.....	Inspectors of diocesan schools (8)..... 	 Rev. Ralph Hunt, S. T. L., superintendent of schools.
Santa Fe.....	Denver.....	School board (4).....	

TABLE 2.—General statistics of parish schools in 1915 and 1916.

[Archdioceses indicated by asterisk (*).]

Ecclesiastical province.	Dioceses included in province.	1915			1916		
		Catholic population.	Pupils.	Schools.	Catholic population.	Pupils.	Schools.
Baltimore.....	*Baltimore....	261,000	25,254	91	261,000	27,908	96
(Includes Delaware,	Charleston	9,300	651	8	9,300	751	8
Maryland, Virginia, West	(S. C.)						
Virginia, North Carolina,	Richmond....	42,000	4,800	27	42,200	4,692	27
Georgia, eastern Florida.)	St. Augustine.	40,690	4,021	18	51,000	2,880	18
	Savannah....	18,768	3,541	17	19,384	4,018	17
	Wheeling....	55,000	4,000	22	55,162	3,643	21
	Wilmington	38,000	4,100	14	38,000	4,284	14
	(Del.)						
	North Carolina	6,972	1,400	16	7,290	977	16
Boston.....	*Boston.....	900,000	61,666	98	900,000	62,800	100
(Includes Maine, New	Burlington....	82,878	7,045	21	84,949	6,922	21
Hampshire, Vermont,	Fall River....	164,000	13,344	30	173,366	13,121	30
Massachusetts, Rhode	Hartford.....	441,193	37,556	82	469,701	39,081	86
Island, Connecticut.)	Manchester....	130,081	17,664	41	134,000	17,559	41
	Portland.....	131,638	13,578	44	131,638	14,637	47
	Providence....	275,000	19,169	38	275,000	20,319	38
	Springfield....	328,000	28,960	67	327,468	29,286	68

TABLE 2.—General statistics of parish schools in 1915 and 1916—Continued.

Ecclesiastical province.	Dioceses included in province.	1915			1916		
		Catholic population.	Pupils.	Schools.	Catholic population.	Pupils.	Schools.
Chicago.....	Alton.....	87,000	10,309	68	87,000	10,480	67
(Includes Illinois.)	Belleville.....	71,500	10,205	80	71,500	9,749	76
	*Chicago.....	1,150,000	109,162	256	1,150,000	110,860	250
	Peoria.....	108,879	12,957	75	112,873	12,647	75
	Rockford.....	56,000	4,730	28	57,918	5,198	29
Cincinnati.....	*Cincinnati.....	200,000	30,281	120	200,000	31,500	123
(Includes Ohio, Indiana, Kentucky, Tennessee, lower Michigan.)	Cleveland.....	392,000	46,490	141	400,000	47,528	126
	Columbus.....	101,179	12,987	57	101,179	13,311	59
	Covington.....	60,400	7,446	37	60,500	7,762	37
	Detroit.....	344,000	36,374	91	360,000	39,838	93
	Fort Wayne.....	117,186	18,952	89	120,685	19,584	93
	Grand Rapids.....	140,000	17,400	80	140,000	17,775	83
	Indianapolis.....	127,955	18,559	122	128,741	18,934	122
	Louisville.....	110,209	14,091	85	111,371	12,889	83
	Nashville.....	19,000	4,200	30	19,000	4,170	25
	Toledo.....	100,000	15,070	72	101,923	15,290	72
Dubuque.....	Cheyenne.....	13,000	223	2	13,000	235	2
(Includes Iowa, Nebraska, Wyoming.)	Davenport.....	53,043	4,806	42	55,000	6,387	45
	Des Moines.....	31,885	2,634	17	32,456	2,532	19
	*Dubuque.....	132,560	25,890	95	108,000	14,873	93
	Kearney.....	11,959	283	2	12,030	549	3
	Lincoln.....	30,979	2,245	21	28,266	2,337	24
	Omaha.....	80,465	10,954	92	80,465	11,793	95
Milwaukee.....	Sioux City.....	61,672	8,339	58	61,944	8,694	63
(Includes Wisconsin, northern Michigan.)	Green Bay.....	146,765	18,633	108	146,765	18,694	109
	La Crosse.....	115,000	10,438	80	117,000	11,093	85
	Marquette.....	97,000	7,955	26	97,000	7,983	26
	*Milwaukee.....	260,000	37,242	155	260,000	36,776	159
	Superior.....	54,705	4,582	23	54,058	4,624	24
New Orleans.....	Alexandria.....	36,200	1,851	18	36,400	1,864	18
(Includes Louisiana, Alabama, Mississippi, Texas, Arkansas, Oklahoma, western Florida.)	Corpus Christi.....	80,000	2,130	22	87,300	1,900	24
	Dallas.....	30,000	5,071	33	33,000	4,979	33
	Galveston.....	36,000	5,288	40	67,000	5,740	40
	Little Rock.....	23,000	3,305	42	23,000	3,394	45
	Mobile.....	44,570	5,803	36	46,000	5,501	36
	Natchez.....	25,362	3,767	20	28,003	3,638	35
	*New Orleans.....	550,000	21,628	90	550,000	21,568	90
	Oklahoma.....	38,233	4,865	39	40,633	5,087	39
	San Antonio.....	139,576	7,675	63	143,600	6,898	60
New York.....	Albany.....	205,000	18,611	49	210,000	19,106	49
(Includes New York State, New Jersey.)	Brooklyn.....	750,000	58,259	106	750,000	61,393	109
	Buffalo.....	307,441	35,811	125	310,000	37,522	127
	Newark.....	425,000	56,793	125	425,000	58,080	125
	*New York.....	1,219,520	86,863	176	1,219,920	88,125	181
	Ogdensburg.....	97,000	3,888	17	98,000	4,435	17
	Rochester.....	155,000	21,194	63	159,840	21,456	64
	Syracuse.....	151,463	10,943	25	151,463	11,487	29
	Trenton.....	160,000	13,702	44	168,000	14,598	47
Oregon.....	Baker City.....	6,450	703	4	6,967	690	5
(Includes Oregon, Washington, Idaho, Montana, Alaska.)	Boise.....	16,000	1,389	8	16,000	1,441	9
	Great Falls.....	27,500	1,200	9	28,500	956	7
	Helena.....	70,000	5,836	14	70,200	6,100	47
	*Oregon City.....	60,000	5,921	46	60,000	6,000	16
	Seattle.....	70,000	4,629	27	70,000	5,242	28
	Altoona.....	11,500	3,360	8	11,500	4,400	9
Philadelphia.....	Altoona.....	94,530	9,567	37	127,000	10,894	42
(Includes Pennsylvania.)	Erie.....	125,000	12,247	47	125,000	11,522	47
	Harrisburg.....	59,233	9,755	42	62,977	10,091	43
	*Philadelphia.....	700,000	74,934	154	700,000	79,232	163
	Pittsburgh.....	500,000	52,743	175	510,000	54,794	175
	Seranton.....	278,000	18,270	84	278,000	19,857	81
St. Louis.....	Concordia.....	30,201	3,981	31	31,980	4,286	31
(Includes Missouri, Kansas.)	Kansas City.....	70,000	6,967	52	70,000	7,242	52
	Leavenworth.....	70,000	6,500	52	69,000	6,000	53
	St. Joseph.....	35,000	3,269	28	35,000	3,445	30
	*St. Louis.....	385,000	32,044	168	385,000	32,837	169
	Wichita.....	32,500	2,958	36	35,000	3,364	43
St. Paul.....	Bismarck.....	33,500	1,880	9	33,600	2,090	10
(Includes Minnesota, South Dakota, North Dakota.)	Crookston.....	23,000	970	7	24,167	1,020	7
	Duluth.....	45,400	2,625	10	51,500	3,019	11
	Fargo.....	69,871	2,492	16	69,871	2,587	17
	Lead.....	15,000	186	3	15,000	281	4
	St. Cloud.....	65,500	4,600	25	62,694	5,882	31
	*St. Paul.....	265,000	22,817	95	265,000	23,376	95
	Sioux Falls.....	30,500	3,831	29	60,947	4,422	29
	Winona.....	67,000	6,300	32	67,000	6,187	34

TABLE 2.—General statistics of parish schools in 1915 and 1916—Continued.

Ecclesiastical province.	Dioceses included in province.	1915			1916		
		Catholic population.	Pupils.	Schools.	Catholic population.	Pupils.	Schools.
San Francisco..... (Includes California, Nevada, Utah.)	Monterey and Los Angeles. Sacramento.... Salt Lake..... *San Francisco	139,480 50,000 13,000 280,000	9,316 2,312 280 12,236	40 11 4 46	178,168 50,000 13,000 290,000	8,602 2,332 643 12,869	43 11 3 46
Santa Fe..... (Includes Colorado, Arizona, New Mexico.)	Denver..... *Santa Fe..... Tucson.....	108,336 140,573 40,000	7,291 3,607 2,359	30 22 7	110,384 140,573 40,000	6,833 3,872 2,484	30 22 7
Ruthenian-Greek.....		500,000		150	500,000	10,966	150
Total.....		16,309,310	1,456,206	5,488	16,575,609	1,498,349	5,597

EDUCATIONAL WORK OF THE PRESBYTERIAN CHURCH IN THE UNITED STATES OF AMERICA.

The educational activities of the Presbyterian Church in the United States of America are for the most part covered by the reports of (a) The woman's board of home missions, (b) The board of missions for freedmen, and (c) The college board. The following brief general statements will serve to indicate the character and scope of the contribution which the church is making to the cause of education throughout the United States, as well as in Alaska, Cuba, and Porto Rico. Mention should be made of the fact that one boarding school, namely, the Polytechnic Institute of Porto Rico, is under the board of home missions of the Presbyterian Church in the United States of America. This project is being developed along interdenominational lines somewhat after the plan followed at Park College, Missouri.

The task of the woman's board of home missions is primarily to establish and maintain grammar and secondary schools at strategic points throughout the United States, among communities deprived by location, race prejudice, environment, or for some other reason of the advantages of public-school education or Christian influence and training of any kind. Through the mission schools established in such centers, appeal is made to the moral and spiritual sides of life, and the resulting tendency is almost invariably a general mental awakening and improved standards of living. The course of study followed in the mission schools is similar to that of the State public schools, with greater emphasis placed on the industrial training, so that when boys and girls leave these schools they may be well equipped for the successful undertaking of life in a rural environment, both as useful citizens and as home makers.

Mention should also be made of Presbyterian schools in immigrant communities. These are controlled on a different basis from

the others, the work being administered locally, although the funds pass through the hands of the board. The reports issued by the church show 21 boarding schools, with a total of 190 teachers and workers, an enrollment of 2,000, and an average attendance of 1,540. Two of these schools, Wasatch Academy, at Mount Pleasant, Utah, and the Normal and Collegiate Institute, at Asheville, N. C., have more than 200 students. The report for 1915 shows 18 day schools (9 in New Mexico, 2 in Colorado, 4 in Utah, 3 in Cuba); a total of 51 workers; an enrollment of 1,357; and an average attendance of 657. In the same report 13 community stations are listed, with 44 workers and 510 pupils in special classes. There were also 5 hospitals and medical stations with 15 workers and 18 student nurses. The following is a summary by fields:

Presbyterian Church schools—Summary by fields.

Population.	Number of stations.	Number of workers.	Enrollment.			
			Boarding pupils.	Day pupils.	Enrollment in special classes.	Total.
Alaskans.....	2	18	146	.....	.....	146
Indians.....	11	48	357	.....	28	385
Mexicans.....	18	54	318	687	.....	1,005
Mormons.....	9	36	278	271	84	633
Mountaineers.....	27	108	921	.....	398	1,319
Cubans.....	3	29	.....	399	.....	399
Porto Ricans.....	3	14	.....	.....	.....	.....
Foreigners.....	1	.....	.....	.....	.....	.....
Total.....	74	307	2,020	1,357	510	3,887

The college board was organized by the General Assembly of the Presbyterian Church in 1883. It represents the church in its work and relations with educational institutions, including those of college and university rank as well as academies and special schools. Its function is to aid in the establishing and strengthening of such institutions. In this it differs from the board of education of the Presbyterian Church, the function of which is to aid students and to carry on religious work among Presbyterian students in tax-supported institutions.

Presbyterian colleges are so called for various reasons. Some are connected with the church by means of a charter provision requiring their trustees to be elected by an ecclesiastical body, such as a presbytery or synod, or that all or a part of the trustees be members of the Presbyterian Church. Sometimes both of these charter requirements exist.

The relation thus established between the church and the institution is commonly called the "organic" relation. Other colleges called Presbyterian are so by reason of historical associations and

the fact that a majority of their students and friends have been members of this church. Among such institutions are Washington and Jefferson College, Hamilton College, Coe College, and others.

The relation of the college board to a Presbyterian college is an administrative or financial relation, not an ecclesiastical relation. This board gives out of its treasury from time to time whatever funds may be available toward the endowment or current support of certain Presbyterian colleges needing such help. The number of such institutions thus aided varies from year to year. With other colleges not receiving such financial aid the board sustains an advisory relation, counseling from time to time with boards of trustees or with presidents on matters of policy or administration.

During the year closing March 31, 1916, there were in the list of institutions sustaining the above relations with the college board 1 university, 46 colleges, 7 special and technical schools, 4 junior colleges, and 7 secondary schools. These institutions reported a total enrollment of 24,558 students; a total income for current expenses during the year of \$3,051,102; a total value of grounds, buildings, and equipment of \$21,128,964; and endowment funds totaling \$15,239,397.

The board of missions for freedom has for its task the educational development of the Negro race in the South. This has been an important problem for the church ever since the emancipation of the negro. The total number of schools is 658, of which 137 are day schools and 27 boarding schools. There were 494 teachers in the day schools, and the total enrollment reported in all the schools was 17,794.¹

EDUCATIONAL WORK OF THE PRESBYTERIAN CHURCH IN THE UNITED STATES.

By Henry H. Sweets, D. D., Secretary of Education.

The Presbyterian Church in the United States (commonly called the Southern Presbyterian Church) began its separate existence in Augusta, Ga., in 1861.

Following the traditions of the church, from its very inception it turned its attention to the work of Christian education. There were almost insurmountable difficulties, however, to be overcome. The endowment funds of schools and colleges that had been accumulating for years were now of small value. The poverty of the people gave little hope for the immediate remedying of this condition. For many years the task was slow and uncertain.

¹ For a detailed account of Negro educational work by the denominations, see Bull., 1916, Nos. 38 and 39.

These difficulties have been in part overcome and the work of education is being placed on a firmer basis. Each one of the synods is now actively engaged in the work of correlating, standardizing, and unifying the appeal of all the institutions within its bounds.

The General Assembly of the church is composed of 16 synods, which comprise the States of Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Missouri, Arkansas, Oklahoma, Texas, and New Mexico.

Under the control of these synods and the presbyteries which compose them are the following educational institutions:

Six theological seminaries, with 43 in faculty, 326 students preparing for the work of the ministry, 43 buildings, property valued at \$1,025,975, endowment funds of \$1,840,488, and 122,455 books in the libraries.

Seventeen colleges, with 263 in faculty, 2,858 students, 118 buildings, property valued at \$3,561,532, endowment funds of \$1,867,913, and 121,117 books in the libraries.

Twelve junior colleges, with 160 in faculty, 1,412 students, 44 buildings, property valued at \$1,260,500, endowment funds of \$123,709, and 15,880 books in the libraries.

Twenty-two preparatory schools, with 135 in faculty, 2,032 students, 81 buildings, property valued at \$538,138, endowment funds of \$129,460, and 10,026 books in the libraries.

Two collegiate institutes, with 18 in faculty, 265 students, 6 buildings, property valued at \$25,000, no endowment funds, and 2,800 books in the libraries.

Sixteen elementary schools, with 33 in faculty, 830 students, 21 buildings, property valued at \$37,300, no endowment funds, and 990 books in the libraries.

Eleven orphans' homes and schools, with 43 in faculty, 1,032 children, 75 buildings, property valued at \$873,000, endowment funds of \$189,000, and 13,927 books in the libraries.

This gives a total of 86 educational institutions, with 695 in the faculty, 8,755 students, 388 buildings, property valued at \$7,321,445, endowment funds of \$4,150,570, and 287,195 books in the libraries.

Mountain schools.—The Presbyterian Church in the United States conducts 34 schools of various grades in the Appalachian Mountains in the States of West Virginia, Virginia, North Carolina, Georgia, Tennessee, and Kentucky, and 1 in the Ozark Mountains in Missouri. Every effort is being put forth to develop self-reliance and self-support in these mountain communities, and for this reason many of the schools of lower grade are not considered as permanent institutions.

Negro schools.—Four primary schools for the Negro population of the South are conducted, and a large college and theological seminary at Tuscaloosa, Ala., is maintained by the church. Every effort is being made to develop the Negro population into faithful, industrious, and moral citizens.

Indians.—For many years the church has maintained some schools among the Indians in what is now the State of Oklahoma. A well-equipped college for girls has been established at Durant, Okla. An orphanage is also maintained for these people to shelter homeless Indian children.

Mexicans.—The church is putting forth efforts in southeastern and southwestern Texas for the education of the thousands of Mexicans who have crossed the Rio Grande. Several primary schools have been erected and maintained, and an industrial training school of higher order has been established in Kingsville, Tex., to minister to this Mexican population.

METHODIST EPISCOPAL CHURCH, SOUTH.

(From the 22d Annual Report of the Corresponding Secretary, Stonewall Anderson.)

The past year has been one of unusual activity on the part of the educational forces of the church. The enrollment of students is larger than in the previous year, and there has been an advance in the collections on the assessments for education.

An educational conference was held April 4-6 at Birmingham. The conference was composed of representatives from the several annual conferences, representatives from the schools, colleges, and universities of the church, and others interested in educational work.

These conferences furnish an opportunity for the educators and educational workers of the church to discuss in open conference and face to face the principles, methods, and problems of education.

Religious education has come to mean vastly more than merely conducting schools owned and controlled by the church. Whatever our schools may be able to do in the field of general education—and they are doing much and must continue to do so—religious education should be at the very heart and center of their work. Furthermore, it is of the highest importance that the four great agencies of religious education—the home, the Sunday school, the young people's societies, and the church schools—understand each other thoroughly, cooperate with each other fully, and coordinate and correlate their efforts in giving religious education to the childhood and youth of the church and country.

The board at its last session appointed two committees to make investigations during the year of important phases of religious education and to present the results of their investigations, with recom-

mendations, to the present session of the board. These committees are composed, respectively, of Dr. Andrew Sledd and Dr. R. P. Taylor.

NORTHERN BAPTIST CONVENTION.

(Information from the Fifth Annual Report of the Board of Education, F. W. Padelford, Executive Secretary.)

The 1916 report of the board of education of the Northern Baptist Convention lists 8 theological seminaries, 24 colleges, and 24 academies. The colleges and theological seminaries have in all 6,316 students of college rank, out of a total of 16,898 students and 1,109 teachers. Land and buildings are valued at \$23,248,814 and endowment at \$32,543,541, with an annual income of \$3,627,939. The academies enrolled 3,520 students and had 287 teachers. The reported income was \$680,346.

The board of education was created for the purpose of stimulating a deeper interest in education within the Baptist churches, and of so developing our schools that we may make a larger contribution to the education of the world. Five years of service have now been completed by the board. The board was originally authorized by the Northern Baptist Convention in session at Chicago, in 1910. The year following, however, the board was without funds, and devoted itself largely to the question of the reorganization of our educational forces. At Des Moines, in 1912, the board was reorganized, fully correlated with the American Baptist Education Society, and began its active career.

The board has determined to devote all the energy within its power to aid our schools and societies to secure at least the \$6,000,000 in five years. During this first year our institutions at home have added \$2,417,222 to their funds, of which \$1,116,147 went to the University of Chicago and \$1,301,075 to 35 other institutions. Our missionary societies have added \$304,800 to their educational funds. This includes a gift of \$300,000 from the estate of Mrs. Rockefeller to the Woman's American Baptist Foreign Mission Society.

The new Iowa College.—The most important single event of the year has been the adjustment of the Baptist educational situation in Iowa. This situation is described in the annual report as follows:

The first Baptist school planted in Iowa was founded amid serious differences of opinion. These differences have marked the entire history of our work in that State and have militated against the development of our institutions. Central College was established at Pella, in 1853, and Des Moines College at Des Moines, in 1865. Between the friends of these institutions there has been a rivalry that has not benefited either. This fact has been universally recognized and deplored, and many efforts have been made toward readjustment.

Two years ago, in the spring of 1914, the board of education ventured to suggest to the two colleges a possible method of adjustment. The suggestion

was received in a friendly spirit. We have been working on the proposition slowly, as the case demanded, with the friends of both colleges, and at last the solution has been reached.

Central College is located in a strong center of the Reformed Church. There are three large churches of that denomination in the village of Pella alone, while there is only one Baptist Church. The students from the Reformed Churches have long outnumbered the Baptist students in the college. These people are prosperous and well to do. After studying the problem carefully it seemed to us that they were the natural ones to control this college in their midst, and we suggested that the trustees should turn the institution over to the Reformed Church, many of whose members have long been generous supporters of the institution, and several of whom have been members of the board. The Baptist members were at first a bit loath to take this step, but its reasonableness gradually appealed to them. On November 30, 1915, the board of trustees, without a dissenting voice, voted to turn over the entire property, including campus, buildings, and equipment, together with \$14,000 endowment entailed for use at Pella, to the Reformed Church in America. The representatives of this church have heartily responded to this opportunity, and have gladly accepted this great gift.

After passing this vote the trustees voted to turn over all the balance of their funds to the American Baptist Education Society, to be held in trust for the Baptist educational interests of Iowa.

Following the action of the trustees of Central College the trustees of Des Moines College voted to transfer all their property and holdings to the American Baptist Education Society for the same purpose.

The way is now clear, therefore, to found a new institution upon the assets of both of the old colleges. Committees of conference have been appointed to find the proper location and to found the new school.

PROTESTANT EPISCOPAL CHURCH.

The General Board of Religious Education of the Protestant Episcopal Church, "canonically established on its present wide basis" in 1913 for the purpose of unifying and coordinating the church's educational work, has presented a comprehensive report of its aims and organization and the plan and scope of its work and its general policies and ideals.¹ The canon which established the board is as follows:

I. There shall be a general board of religious education, the purpose of which shall be the unification and development of the educational work of the church under the constitution and canons of the General Convention.

II. The board shall be composed of the presiding bishop, a general secretary, when chosen, and 20 other members who upon the passage of this canon shall be appointed by the presiding officers of both houses acting together during the meeting of the General Convention of 1913, of whom 12 shall be appointed to serve until their successors are appointed at the next General Convention, and 1 from each of the eight departments to serve until his successor is chosen by his department. Thereafter 12 shall be triennially appointed at the meet-

¹ "Church Ideals in Education," issued from the headquarters of the board, 289 Fourth Avenue, New York City.

ing of the General Convention by the presiding officers of both houses acting together. In the appointments, each of the three orders shall be represented. The 8 other members shall be elected, 1 by each of the provincial boards of religious education at its first regular meeting after the General Convention. Each member elected by a provincial board shall serve for three years, or until his successor is elected by his provincial board. In case of vacancies occurring in the number of members appointed by the presiding officers of the General Convention, the general board may elect members to hold office until the next meeting of the General Convention. The General Board may add not exceeding 10 members to its number who shall serve until the next meeting of the General Convention.

III. The presiding bishop shall be ex officio the president of the board. Nine members shall constitute a quorum. The board shall choose from within or without the board a general secretary, who shall be ex officio a member of the board and its executive officer. The board shall elect a secretary and a treasurer. It shall have power to form committees with membership drawn from within, and when deemed desirable from without, the board, and shall create such agents as its work may demand.

IV. The general board is authorized to receive gifts and to appeal to each diocese and missionary district within the church through its convention or council for the funds necessary for carrying on its work efficiently.

V. Each provincial board shall make an annual report of its work to the general board, and the general board shall make a triennial report to the General Convention.

While the task of the board concerns itself chiefly with religious education, its effect upon general educational policy should be considerable. The report points out that:

The greatest task in the teaching of religion to-day is to establish a continuous interrelation between the home, the parish, the school, the college, and the seminary. Each is a stage in the progress of the individual into the fullness of religious life. But until each stage hands up a definite contribution to the next and builds upon a definite accomplishment of the preceding the process is balked, results are lost, and labor is wasted.

To avoid this, the General Board has four departments devoted to Parochial Education, Secondary Education, Collegiate Education, and Theological Education. The work of each department is related to and developed by a unified plan determined by the action of the General Board.

Regarding educational administration in the dioceses, the report says:

The most pressing need of the church to-day is educational leadership. The church is not producing leaders in proportion to her need. In 25 years past the communicants of the church have increased by over 100 per cent. In 1890, there were 77 candidates for every 100,000 communicants. To-day there are only 37. Not only are we deficient in general leadership, but the same is true of Sunday-school teachers who are also leaders in the parish. In 15 years the Sunday-school teachers of the diocese of New York have decreased by 300. While volunteer teachers are being secured for missionary, philanthropic, and civic interests, the clergy in general would probably testify that it is more difficult than ever to obtain volunteer leaders for educational work.

Leadership counts all along the line, but primarily in the educational processes. Clergy, seminary trained, are coming to the general board to be trained as headmasters in parochial education. Men who have caught the vision are starting schools for the training of teachers and of lay-workers. Women in missions are bestirring themselves to produce leaders. But still the supply is so far behind the demand as almost to stifle effort. A more than average salary, writes a rector from Texas, is ready here for a curate who understands education. A bishop seeks in vain for a young man trained to grapple with a college situation. A diocese hunts for two years for a man competent to be its educational secretary, and then contents itself with making one. The head of a large downtown parish asks for some one to make a critical educational valuation of his social-service work, but there is no available candidate. A parish wants a director of parochial education in religion. It takes four months to discover the right person—a young woman with training.

REFORMED CHURCH IN AMERICA, WOMEN'S BOARD OF DOMESTIC MISSIONS.

By Mrs. J. S. Allen, Corresponding Secretary.

In Jackson County, Ky., the Women's Board of Domestic Missions maintains three schools—at McKee, the county seat, at Gray Hawk, and at Annville.

The academy at McKee has been in operation 10 years, though previous to that time some simple educational work had been maintained for 3 years. The school aims to take all its pupils through the eighth grade, but the few who are desirous of high-school training or normal work are also provided for. A number of the graduates of the school are teaching in Jackson or adjacent counties. Industrial work is given to both girls and boys. The girls have a thorough course in domestic science and receive practical experience in the work of maintaining the dormitory and sharing in the cooking, bed-room, and laundry work. During the year 1915-16 there were 150 pupils, with an average daily attendance of 130. Five regular teachers are employed besides the matron and such helpers as are needed. The physical equipment consists of a good-sized school building, a small house, or dormitory, and a larger building just nearing completion.

In response to the urgent request of parents at Gray Hawk, where the board has hitherto maintained a Christian social settlement and a hospital, a primary school was opened in the fall of 1915 in connection with the church. There were 41 pupils enrolled, in charge of one teacher, and the work covered four grades. The school has been enlarged for the 1916-17 session and another teacher employed.

The most comprehensive educational work of the board in Jackson County is conducted at Annville. Here there is a well-equipped experimental farm with a herd of cattle, a canning plant for fruit

and vegetables, a building for industrial work, a blacksmith and wagon-building shop for the use of students, an excellent dormitory for boys and also one for girls, and a large school building. There was a total enrollment of 347 in 1915-16, with a large waiting list. The regular academic course is through the eighth grade, and 20 pupils graduated from that grade in 1916. Those desiring it as at McKee received the advanced course and are fitted to teach. Occasionally pupils are sent to some of the southern colleges. Eight regular teachers are employed besides matrons, helpers, farm instructors, wagon makers, and head workers.

Indian work.—Pending the building of a primary school and dormitories, which are under way on the Winnebago Indian reservation in Nebraska, the board last year provided for the education of 20 children at Santee, Nebr. This year the primary children will be cared for at the board's own station and scholarships will be provided for the more advanced at the Santee school.

CHAPTER XXVI.

EDUCATIONAL WORK IN THE YOUNG MEN'S CHRISTIAN ASSOCIATION.

By GEO. B. HODGE,

Educational Secretary, Young Men's Christian Association.

STATISTICS.

While the Young Men's Christian Associations have expended a total of \$1,143,086, an increase of \$72,186 over the year previous, the tuition fees paid by the students have amounted to \$940,912, an increase of \$126,888, in addition to the \$250,000 paid by these men in membership fees. Table 1 gives some data concerning this expense in the larger cities.

TABLE 1.—Associations reporting educational expenses over \$3,000, where such amount is 15 per cent or more of the total current expenses of the association.

State.	Association.	Expense.	Per cent.
California.....	Los Angeles.....	\$38,550	26
Colorado.....	Denver.....	13,241	16
District of Columbia.....	Washington.....	18,081	16
Illinois.....	Chicago (Central).....	37,888	27
Do.....	Chicago (Division Street).....	12,040	24
Do.....	Chicago (Sears-Roebuck).....	9,796	23
Maryland.....	Baltimore.....	16,866	18
Massachusetts.....	Boston.....	168,247	53
Do.....	Lawrence.....	5,794	23
Do.....	Worcester.....	8,597	19
Michigan.....	Detroit.....	63,840	36
Do.....	Lansing.....	3,765	17
Minnesota.....	Minneapolis.....	16,843	33
Missouri.....	St. Louis.....	9,000	24
New Jersey.....	Newark.....	16,113	23
New York.....	Brooklyn (Bedford).....	27,350	25
Do.....	Brooklyn (Central).....	35,736	25
Do.....	Buffalo (Central).....	22,080	22
Do.....	New York (Bronx Union).....	3,362	34
Do.....	New York (Twenty-third Street).....	44,769	31
Do.....	New York (West Side).....	103,125	41
Do.....	Rome.....	3,320	32
Ohio.....	Akron.....	6,288	15
Do.....	Cincinnati.....	28,200	49
Do.....	Cleveland.....	24,447	19
Do.....	Columbus.....	8,655	17
Do.....	Dayton.....	12,006	15
Do.....	Youngstown.....	7,877	16
Oregon.....	Portland.....	23,133	20
Pennsylvania.....	Philadelphia (Central).....	25,279	16
Do.....	Pittsburgh (Central).....	4,519	17
Washington.....	Seattle.....	16,275	17

The number of students within the association buildings has increased by 5,470 over the previous year, to 66,588; reports show, however, that the number of students in extension classes outside the building has decreased nearly 7,000, to 15,777. This makes a total of 82,358 different students, as against 83,771 a year ago. Experience

shows that, other things being equal, the most substantial extension work can be done only when there is a strong, virile, and successful work overflowing from the association building. The tables and charts scattered through this report are self-explanatory.

THE EDUCATIONAL SECRETARIES.

There are 84 different Young Men's Christian Associations in each of which there is a senior educational secretary giving his entire time to promoting appropriate educational facilities. In a few of these 84 associations there are from 2 to 15 additional men (51 in all) giving their full time as heads of departments, teachers, and leaders in the educational activities conducted by the associations. These 135 men, 84 secretaries and 51 others, giving full time to this work in the association, received a total of \$211,000 in salaries the past year, about the same amount for supervision as for each of the past two years.

The majority of the educational secretaries in the United States, in their conference and correspondence, have seemed to stress their efforts on a few semiprofessional courses promoted largely by outside agencies for the more mature men and those able to pay high tuition fees. The fear has been expressed in several parts of the country that this special emphasis, while good in itself, has often been made at the expense of promoting the equally important, but more elementary and far more needed, subjects and courses for the many times larger body of employed men and boys who are unable to pay large tuition fees.

The purpose of the Young Men's Christian Association in promoting educational facilities is to help meet some of the vocational requirements of our present day civilization and at the same time develop Christian manhood. All forms of effort, whether by individuals, by clubs, by the church, or by the Young Men's Christian Association, find opportunity to encourage and supplement the work of the public schools. Experience shows that the association, with its distinct objective, can teach mechanical drawing or any other one of its 200 subjects or courses, to employed men and at the same time build that kind of character which makes nobler men and better citizens.

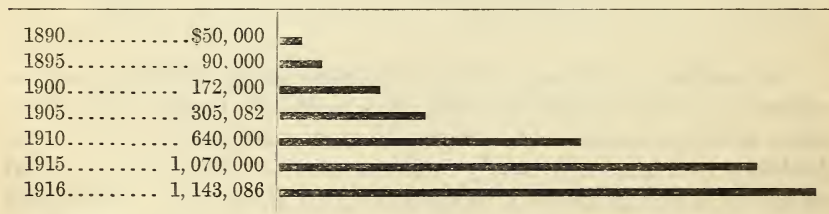


DIAGRAM 1.—Expense of association educational work, aside from light, heat, and rent.

SCOPE OF ASSOCIATION ACTIVITIES.

The scope of association educational activities includes reading rooms and libraries, lectures and talks, educational clubs, class-lecture series, evening classes, association day schools, boys summer schools, extension features, English for foreigners, special courses, boys' departments, and annual examination in the fundamental subjects.

Reading room and libraries.—About a half million males took advantage of reading room and library privileges during the year. Table 2 herewith shows the associations in each of which 5,000 standard books were read the past year.

TABLE 2.—Associations in which 5,000 or more books were drawn and used.

Provinces and States.	Association.	Books.
Manitoba.....	Winnipeg.....	13,924
Ontario.....	White River (R. R.).....	9,893
Quebec.....	Montreal.....	20,010
Alabama.....	Mobile.....	5,573
Connecticut.....	Bridgeport.....	8,160
District of Columbia.....	Washington.....	24,111
Maine.....	Rockport.....	10,047
Minnesota.....	St. Paul (R. R.).....	6,142
Missouri.....	St. Louis (R. R.).....	5,900
New York.....	Albany.....	37,510
Do.....	New York (Twenty-third Street).....	24,102
Do.....	New York (West Side).....	84,630
Do.....	New York (Grand Central Terminal R. R.).....	28,836
Ohio.....	Lorain.....	14,000
Pennsylvania.....	Philadelphia (Central).....	7,242
Do.....	Sunbury (R. R.).....	6,131

Lectures and talks.—Lectures and talks to the number of 16,590 are reported, attended by nearly a million persons. Formal, high-grade lectures for mixed audiences, with paid speakers of national reputation, are relatively decreasing, while the informal practical talks or demonstrations given by local talent to small groups of men and boys, day or night, are increasing. Table 3 gives the associations reporting 40 or more educational lectures and practical talks the past year.

TABLE 3.—Associations reporting 40 or more educational lectures and practical talks.

State.	Association.	Lectures.
Ontario.....	Niagara Falls (R. R.).....	56
Arizona.....	Phoenix.....	55
California.....	Los Angeles.....	107
Do.....	Oakland.....	67
Do.....	San Francisco.....	57
Colorado.....	Colorado Springs.....	45
Do.....	Denver.....	63
Connecticut.....	Hartford.....	62
Do.....	New Haven.....	303
District of Columbia.....	Washington (R. R.).....	246
Do.....	Washington (Colored).....	310
Hawaiian Islands.....	Honolulu.....	115

TABLE 3.—Associations reporting 40 or more educational lectures and practical talks—Continued.

State.	Association.	Lectures.
Illinois.....	Chicago (Central).....	62
Do.....	Chicago (Sears-Roebuck).....	184
Do.....	Chicago (Wilson Ave.).....	110
Do.....	Moline.....	122
Indiana.....	Indianapolis.....	56
Kansas.....	Parsons (R. R.).....	370
Maryland.....	Baltimore (B. & O. R. R.).....	107
Massachusetts.....	Boston.....	141
Do.....	Cambridge.....	180
Do.....	Lowell.....	55
Do.....	Springfield.....	57
Michigan.....	Detroit.....	144
Do.....	Durand (R. R.).....	182
Do.....	Jackson.....	41
Minnesota.....	Duluth.....	51
Do.....	Minneapolis.....	132
Missouri.....	Kansas City.....	74
Do.....	St. Louis (R. R.).....	44
Nebraska.....	Fremont.....	53
Do.....	Omaha.....	45
Do.....	Seward.....	43
New Hampshire.....	Berlin.....	76
New Jersey.....	Camden (R. R.).....	103
New York.....	Albany.....	42
Do.....	Brooklyn (Bedford).....	137
Do.....	Brooklyn (Central).....	58
Do.....	Buffalo (Central).....	64
Do.....	New York (Bronx Union).....	52
Do.....	New York (East Side).....	41
Do.....	New York (Harlem).....	73
Do.....	Oswego (R. R.).....	74
Do.....	Poughkeepsie.....	49
Do.....	Yonkers.....	33
North Carolina.....	Charlotte.....	69
Do.....	Spencer (R. R.).....	50
Ohio.....	Chicago Junction (R. R.).....	45
Do.....	Cincinnati (Central).....	71
Do.....	Cincinnati (St. Bernard Branch).....	47
Do.....	Columbus.....	43
Do.....	Dayton.....	67
Do.....	Hamilton.....	170
Oregon.....	Portland.....	101
Pennsylvania.....	Chester.....	113
Do.....	Conway (R. R.).....	77
Do.....	Du Bois (R. R.).....	49
Do.....	Erie.....	55
Do.....	Johnstown.....	46
Do.....	Lancaster.....	57
Do.....	Philadelphia (Central).....	84
Do.....	Philadelphia (West).....	73
Do.....	Philadelphia (P. R. R.).....	60
Do.....	Philadelphia (Colored).....	79
Do.....	Pittsburgh (Central).....	94
Do.....	Pittsburgh (Colored).....	46
Rhode Island.....	Providence.....	239
South Carolina.....	Darlington.....	65
Do.....	Pacolei.....	40
Tennessee.....	Knoxville.....	96
Do.....	Knoxville (R. R.).....	41
Virginia.....	Newport News.....	81
Do.....	Richmond.....	68
Do.....	Richmond (Colored).....	62
Wisconsin.....	Milwaukee.....	58
Texas.....	Palestine (R. R.).....	40

Educational clubs.—The educational clubs form an active and growing feature. Over 29,000 men are in 90 different kinds of these clubs for study, research, debate, and discussion. Table 4 shows the associations reporting five or more educational clubs for the past year:

TABLE 4.—Associations reporting 5 or more educational clubs with 100 or more members.

Association.	Clubs.	Members.	Association.	Clubs.	Members.
Victoria, British Columbia...	10	200	Saginaw, Mich.	5	160
St. Thomas, Ontario (R. R.)...	10	350	St. Paul, Minn. (R. R.)....	5	188
Toronto, Ontario (Broadview Br.)	6	204	Omaha, Nebr.	11	195
Fresno, Cal.	5	189	Camden, N. J. (R. R.)....	6	241
Los Angeles, Cal.	5	103	Orange, N. J.	8	134
Oakland, Cal.	7	115	Paterson, N. J.	8	191
Bridgeport, Conn.	5	115	Albany, N. Y. (Central)....	11	298
Hartford, Conn.	8	238	Brooklyn, N. Y. (Central)....	5	150
New Britain, Conn.	5	134	Buffalo, N. Y. (Central)....	9	287
New Haven, Conn.	10	234	New York, N. Y. (East Side) ..	9	110
Washington D. C. (Colored) ..	5	338	Troy, N. Y.	5	154
Honolulu, Hawaii ..	5	104	Waterford, N. Y.	6	130
Chicago, Ill. (Central)....	11	185	Yonkers, N. Y.	5	139
Rock Island, Ill.	7	169	Charlotte, N. C.	6	108
Springfield, Ill.	7	366	Spray, N. C.	21	318
Sterling, Ill.	6	155	Hamilton, Ohio.	9	393
Elkhart, Ind. (R. R.)....	53	1,406	Lorain, Ohio.	5	310
Indianapolis, Ind.	5	105	Toledo, Ohio.	5	121
Indianapolis, Ind. (Colored) ..	6	251	Germantown, Pa.	5	165
Burlington, Iowa.	8	176	Johnstown, Pa.	17	271
Clinton, Iowa.	11	636	Philadelphia, Pa. (Central)....	5	183
Baltimore, Md. (Central)....	7	100	Philadelphia, Pa. (Colored)....	5	140
Cambridge, Mass.	8	341	Pittsburgh Pa. (Central)....	10	157
Chelsea, Mass.	9	168	Pottsville, Pa.	5	121
Lynn, Mass.	5	109	Wilmerding, Pa.	5	157
Worcester, Mass.	5	106	Providence, R. I.	11	145
Detroit, Mich.	5	158	Charleston, S. C.	17	220
Jackson, Mich.	6	109	Knoxville, Tenn.	5	320
			Richmond, Va.	10	344

Class lecture series.—There is an increasing number of professional and semiprofessional courses for mature men, forming a kind of university extension work. The sessions are closely related in a series under one leader, and include quizzes and often written examinations. They differ from the regular class work in that the instruction is largely by the lecture method supplemented by quiz, the same as in college or university. The subjects include those of advertising, salesmanship, credits, efficiency, memory training, and the like. Over 10,000 business and college men are students in such courses. It is thus seen that while the Young Men's Christian Association has over 25,000 students in the elementary subjects, including the three R's, it also has thousands of mature college men in these higher courses. Table 5 gives the places reporting such work where there are over 50 students each.

TABLE 5.—Associations reporting class lecture series with 50 or more students.

	Students.		Students.
San Francisco, Cal.	284	Boston, Mass.	179
Denver, Colo.	248	Springfield, Mass.	247
Bridgeport, Conn.	240	Detroit, Mich.	183
Hartford, Conn.	321	Duluth, Minn.	87
Wilmington, Del.	57	Minneapolis, Minn.	240
Washington, D. C.	384	St. Joseph, Mo.	105
Chicago, Ill. (Sears-Roebuck)....	85	Passaic, N. J.	84
Indianapolis, Ind.	82	Albany, N. Y.	91
Baltimore, Md.	285	Brooklyn, N. Y. (Bedford)....	186

	Students.		Students.
Brooklyn, N. Y. (Central).....	478	Pittsburgh, Pa. (Central).....	70
Buffalo, N. Y. (Central).....	119	Pittsburgh, Pa. (E. L.).....	100
Akron, Ohio.....	59	Pottstown, Pa.....	80
Cincinnati, Ohio.....	111	Providence, R. I.....	267
Dayton, Ohio.....	151	Seattle, Wash.....	450

Evening classes.—Association evening classes include commercial, industrial, academic, language, technical, trade, and high-school subjects, in addition to the three R's. The courses usually run during a term of from 25 sessions to 80 or 100 sessions, depending upon the length of the course and the number of sessions per week. Students pay tuition fees varying from \$1 to \$50 or more per season, depending upon the nature and length of the course and the expense of operation. In the elementary subjects and the three R's, little or no charge is made. There is therefore a constant deficit to the association in teaching these very necessary and much-needed subjects. The age of students ranges from about 14 to 56. There are many courses for men who earn from \$1 a day down to nothing, and there are other courses for men earning from \$5 to \$25 or more per day. These latter men naturally pay the higher tuition fees. About 3,700 teachers, 2,800 of whom are paid, are engaged in this teaching service for the 75,000 men in these evening classes, and nearly 3,000 others are volunteer leaders serving in clubs, giving practical talks, or helping in the library, reading room, or classes. The total amount paid these teachers last year was about \$430,000. Table 6 shows the associations reporting over 500 students each.

TABLE 6.—Associations reporting over 500 students, and where such number is 20 per cent or more of the association membership.

State.	Association.	Students.	Per cent.
California.....	Los Angeles.....	1,167	25
Do.....	San Francisco.....	1,731	40
Colorado.....	Denver.....	747	26
Connecticut.....	Bridgeport.....	525	24
Do.....	Hartford.....	764	26
Do.....	New Haven.....	1,320	131
District of Columbia.....	Washington.....	1,037	38
Hawaii.....	Honolulu.....	524	30
Illinois.....	Chicago (board of managers).....	550	49
Do.....	Chicago (Central).....	2,507	43
Do.....	Chicago (Division Street).....	797	39
Do.....	Chicago (Hyde Park).....	814	49
Do.....	Chicago (Sears-Roebuck).....	782	40
Indiana.....	Indianapolis.....	807	20
Kentucky.....	Louisville.....	631	22
Maryland.....	Baltimore (Central).....	1,276	36
Massachusetts.....	Boston.....	3,638	50
Do.....	Cambridge.....	1,104	138
Do.....	Lawrence.....	514	37
Do.....	Springfield.....	737	65
Michigan.....	Detroit.....	2,496	35
Do.....	Lansing.....	782	101
Minnesota.....	Minneapolis.....	944	53
Nebraska.....	Omaha.....	927	38
New Jersey.....	Newark.....	1,041	38
New York.....	Brooklyn (Bedford).....	1,080	34
Do.....	Brooklyn (Central).....	1,930	32
Do.....	Buffalo (Central).....	833	23
Do.....	New York (East Side).....	868	56

TABLE 6.—Associations reporting over 500 students, and where such number is 20 per cent or more of the association membership—Continued.

State.	Association.	Students.	Per cent.
New York.....	New York (Harlem).....	595	55
Do.....	New York (Twenty-third Street).....	1,961	55
Do.....	New York (West Side).....	3,761	51
North Carolina.....	Charlotte.....	511	47
Ohio.....	Akron.....	1,276	90
Do.....	Cincinnati.....	764	43
Do.....	Cleveland.....	1,664	33
Do.....	Dayton.....	831	28
Do.....	Youngstown.....	510	33
Oregon.....	Portland.....	1,045	33
Pennsylvania.....	Philadelphia (Central).....	3,525	61
Tennessee.....	Knoxville.....	585	38
Washington.....	Seattle.....	1,126	41

Association day schools.—While the number of students in such association schools is no larger than a year ago, yet there has been a distinct improvement in the quality of work done. Experience shows that there is an increasing opportunity for the association to supplement wisely and appropriately the work of other institutions by conducting these day schools for boys. Table 7 shows the associations reporting such work with 50 or more students. The students pay from \$8 to \$12 tuition fee per month, depending on the courses taken. The school hours run from 8.30 a. m. to either 2 or 4 p. m., with appropriate physical, recreational, and vocational training combined. From observation thus far it would seem that each association, in a building of its own and in a community of more than 5,000 males between 12 and 25 years of age, would have ample opportunity to conduct its own association day school. These day schools help serve employed men and boys who are not accommodated in the evening schools; they help meet a demand not yet supplied by public or other day schools which do not afford the additional privileges offered by the association. They utilize more fully the association capital invested in space, equipment, and supervision; they economize operation, supervision, the teaching force, advertising, and the prestige of the evening educational work; they provide for more intensive and adaptable study of special subjects than is possible in many other places; they provide for those who have physically outgrown their grades, or who for other reasons are not successfully served in the public school. They meet the desire of parents who wish appropriate training for their boys under auspices which are permeated by the Christian spirit of the association.

TABLE 7.—Associations reporting daywork with 50 or more students.

State.	Association.	Students.	Expense.	Receipts.
Quebec.....	Montreal.....	68	\$1,240	\$2,696
Alabama.....	Tuscaloosa.....	60		
California.....	Los Angeles.....	564	23,150	28,876
Do.....	San Francisco.....	67	2,000	3,000
Colorado.....	Denver.....	263	2,444	3,574
Illinois.....	Chicago (Central).....	523	9,334	13,477
Do.....	Chicago (Division Street).....	103	2,465	2,879
Do.....	Chicago (Sears-Roebuck).....	92	2,379	3,931
Massachusetts.....	Boston.....	997	79,202	82,973
Michigan.....	Detroit.....	345	13,510	14,414
Minnesota.....	Minneapolis.....	126	6,930	6,930
New York.....	Brooklyn (Bedford).....	317	8,536	12,033
Do.....	Brooklyn (Central).....	151	3,741	1,286
Do.....	Buffalo (Central).....	144	4,000	6,000
Do.....	New York (Twenty-third Street).....	200	7,176	6,551
Do.....	New York (West Side).....	1,037	14,136	33,800
Ohio.....	Cleveland (Central).....	275	6,220	5,516
Do.....	Columbus.....	53	2,357	2,902
Oregon.....	Portland.....	573	9,656	12,833
Pennsylvania.....	Philadelphia (Central).....	167	3,393	3,439
Do.....	Wilmerding.....	71	218	320
Washington.....	Seattle.....	614	5,053	6,816
Do.....	Spokane.....	164	3,633	2,601
Wisconsin.....	Milwaukee.....	62	36	350

The expense of these day schools last year, with their 7,283 students, was \$235,663, covered by the tuition of students. Boys who have prepared for college and university in the association day schools are found doing creditable work in Harvard, Columbia, Yale, Chicago, and many of the western universities. At least two very promising day schools are now being organized in Greater New York, and the number of associations entering this rare field of opportunity will steadily increase for the next few years.

Boys' summer schools.—In many cities where public schools are closed during July and August the association finds a field of opportunity. Table 8 gives the places conducting such schools during the summer of 1915.

TABLE 8.—Boys' summer schools, 1915, with 25 or more students.

State.	Association.	Students.
California.....	Los Angeles.....	35
Colorado.....	Denver.....	62
Connecticut.....	Bridgeport.....	80
Do.....	Hartford.....	71
District of Columbia.....	Washington.....	38
Hawaiian Islands.....	Honolulu.....	53
Illinois.....	Chicago (Central).....	72
Do.....	Chicago (Division Street).....	84
Do.....	Chicago (Sears-Roebuck).....	197
Do.....	Chicago (Wilson Avenue).....	67
Do.....	Peoria.....	26
Maryland.....	Baltimore (Central).....	83
Massachusetts.....	Boston.....	61
Do.....	Everett.....	37
Do.....	Malden.....	72
Do.....	Somerville.....	97
Do.....	Springfield.....	116
Michigan.....	Grand Rapids.....	30
Do.....	Lansing.....	34
Missouri.....	St. Joseph.....	46
Nebraska.....	Omaha.....	202
New Jersey.....	Orange.....	61

State.	Association.	Boys.
New York.....	Brooklyn (Bedford).....	49
Do.....	Brooklyn (Central).....	108
Do.....	New York (Twenty-third Street).....	37
Do.....	New York (West Side).....	98
Ohio.....	Columbus.....	42
Do.....	Hamilton.....	75
Do.....	Youngstown.....	120
Pennsylvania.....	Philadelphia (Central).....	542
Do.....	Scranton.....	57
Rhode Island.....	Providence.....	62
Texas.....	Houston.....	55
Washington.....	Seattle.....	111
Wisconsin.....	Milwaukee.....	154

Extension features.—Over 100 associations conduct educational privileges in various centers of the city, more or less remote from the headquarters. These features include educational clubs, practical talks, and much elementary class work. While helpful to a large extent, this service can not receive that same kind of needed supervision as the work conducted in the association building. Associations therefore are urged first to make sure that the work conducted in the building is just as good as it can possibly be made in quality and service, before they spend much energy in the necessarily more superficial work conducted outside. Often, however, such privileges in a needy section of the city develop into a successful mission at which a branch of the association is later formed. To make such work effective and worthy the name of Young Men's Christian Association, it must be given that same kind of careful thought, energy, time, and effort which is given similar work in the association building.

English for foreigners.—During recent years a larger number of the associations have been specializing on teaching of English and elementary citizenship to men and boys from foreign nations. About 18,000 men and boys the past year have been enrolled in these special classes. The method most successfully used is that of Dr. Peter Roberts, the secretary of the international committee for this special work.

Special courses.—Dr. E. E. Brown, former United States Commissioner of Education, said: "The Young Men's Christian Association is one of the best pioneer educational agencies in America, blazing the way for public schools and others to follow." It strives to meet new needs with new and adapted courses. These new needs are forced upon the attention of the association every time a new vocation or occupation is named, which is about every few months. The number of students in the 20 or more pioneer courses of this kind is steadily increasing. The first poultry school for boys was born in 1908.

The first photoplay writing school and also the correlated school for operators of motion-picture machines was born in the association in 1911; the first window-trimming school, in 1905; the first auto school for men in 1900, and the first auto school for women in 1915.

Boys' departments.—The definite attention given to meeting the needs of employed boys has not kept pace with the effort to provide special and semiprofessional courses for mature men. Two reasons have been given for this disparity of effort. First, the public schools are making heroic effort to help meet the fundamental demands in the three R's among boys; and second, the associations can raise more money in tuition fees among men of means than they can among boys.

TABLE 9.—*Boys' departments with 100 or more boys in class work.*

State.	Association.	Boys.
Quebec.....	Montreal (Central).....	170
California.....	Los Angeles.....	331
Colorado.....	Denver.....	213
Connecticut.....	Bridgeport.....	169
Do.....	Hartford.....	176
Delaware.....	Wilmington.....	115
District of Columbia.....	Washington (colored).....	125
Hawaiian Islands.....	Honolulu.....	165
Illinois.....	Chicago (Central).....	699
Do.....	Chicago (Division Street).....	202
Do.....	Chicago (Sears-Roeback).....	294
Indiana.....	Evansville.....	148
Do.....	Indianapolis.....	280
Kentucky.....	Louisville.....	154
Maryland.....	Baltimore (Central).....	227
Massachusetts.....	Boston.....	228
Do.....	Springfield.....	116
Michigan.....	Detroit.....	118
Do.....	Lansing.....	199
Minnesota.....	St. Paul.....	101
Nebraska.....	Omaha.....	268
New York.....	Brooklyn (Central).....	423
Do.....	New York City (Twenty-third Street).....	314
North Carolina.....	Charlotte.....	266
Ohio.....	Hamilton.....	116
Do.....	Springfield.....	107
Do.....	Youngstown.....	238
Pennsylvania.....	Philadelphia (Central).....	696
Do.....	Scranton.....	103
Tennessee.....	Knoxville.....	112
Washington.....	Seattle.....	172
Wisconsin.....	Milwaukee.....	154

Examinations.—The committee has conducted annual examinations in the fundamental subjects for many years. The past year about 4,000 men took part in such tests. These examinations, while not compulsory on the part of either individuals or of the local associations, materially help teachers and students to compare their work with that of students in similar work for the country. Friends of boys offer incentives to encourage such examinations. Table 10 shows the roll of honor for 1916:

TABLE 10.—Boys' educational roll of honor—1916.

Associations winning the largest actual number of certificates among boy members.	Certificates.	Associations in which the largest per cent of boy members won certificates.	Per cent.
1. Wilmington, Del.	47	1. Mobile, Ala.	14.4
2. Scranton, Pa.	23	2. Wilmington, Del.	14.2
3. Mobile, Ala.	20	3. Cincinnati, Ohio.	7.4
4. Cincinnati, Ohio.	18	4. Scranton, Pa.	5.1
5. Reading, Pa.	16	5. Reading, Pa.	4.8
6. Rochester, N. Y.	13	6. Springfield, Mo.	3.5
7. Springfield, Mo.	11	7. Roanoke, Va.	3.1
8. Hamilton, Ohio.	10	8. Rochester, N. Y.	2.3
9. Camden, N. J.	9	9. Hamilton, Ohio.	2.0
10. Roanoke, Va.	9	10. Camden, N. J.	1.2

Diagrams 2 and 3 below illustrate the growth in two important items of association work—receipts from tuition fees and associations maintaining educational secretaries. Table 11 affords a summary of Y. M. C. A. educational work since 1893.

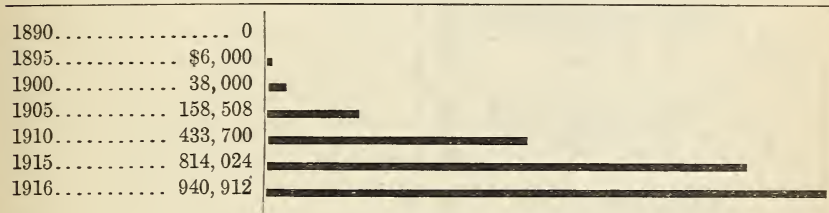


DIAGRAM 2.—Receipts from students' tuition fees, in addition to their membership fees.

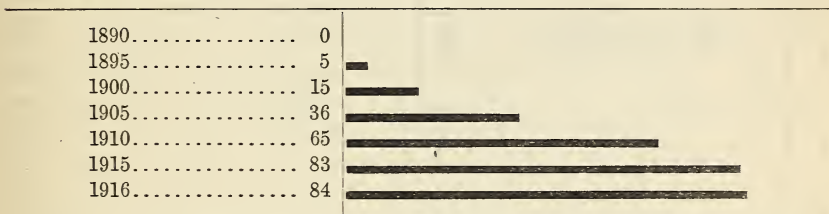


DIAGRAM 3.—Associations with one or more educational secretaries based on official recognition of the association of educational secretaries.

TABLE 11.—*Development of educational work from 1893, when this department of the international committee was organized.*

	1893	1897	1901	1905	1909	1913	1914	1915	1916
Number of lectures and talks.....	1,900	2,929	3,041	3,353	4,936	11,168	13,414	14,319	16,590
Educational club members.....	3,250	4,750	4,618	11,899	19,550	23,820	25,405	26,700	29,197
Number in class-lecture-series courses.....	.....	140	4,750	1,900	3,907	10,089	12,335	26,700	5,950
Expense of advertising.....	\$2,900	\$6,240	\$12,607	\$21,996	\$59,445	\$83,756	\$87,946	\$81,772	\$95,727
Number of associations with educational secretaries.....	1	7	21	36	60	\$191,739	82	84	84
Expense of supervision.....	\$2,000	\$6,816	\$17,739	\$51,877	\$130,821	\$191,328	\$215,907	\$211,000	\$208,740
Number of paid teachers.....	415	845	901	1,704	2,443	2,646	2,558	2,552	2,645
Total different students—day, evening.....	12,000	25,200	26,906	33,520	46,948	72,842	84,577	83,771	82,358
Employed boys in classes.....	.....	.....	1,326	2,900	7,521	11,599	12,886	12,445	11,724
Tuition receipts.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Income from endowment.....	\$2,000	\$18,000	\$48,000	\$158,508	\$355,595	\$714,035	\$785,274	\$814,024	\$940,912
Number international certificates won.....	\$2,500	\$4,771	\$4,910	\$6,754	\$9,687	\$10,159	\$13,424	\$12,766	\$13,744
Students in association day courses.....	.....	566	1,532	1,468	1,231	2,153	1,901	2,240	2,170
Students in boys' summer schools.....	.....	64	560	1,860	3,060	6,934	8,213	8,031	7,283
Students outside building.....	.....	.....	75	600	1,214	2,448	2,289	2,823	3,321
Educational men in Bible study.....	.....	.....	350	600	1,214	11,397	19,091	22,553	15,770
Number of chapel assemblies.....	.....	.....	.....	.....	.....	1,800	2,007	3,389	2,872
Total expense of all features.....	\$72,000	\$119,000	\$193,000	\$305,082	\$570,070	\$990,415	\$1,086,763	\$1,070,900	\$1,143,086

CHAPTER XXVII.

EDUCATIONAL WORK OF THE BOY SCOUTS, GIRL SCOUTS, AND CAMPFIRE GIRLS.

BOY SCOUTS OF AMERICA.

By JAMES E. WEST, Chief Scout Executive.

The Boy Scout movement aims to reinforce all of the agencies which make for right living and character development in the youth of America. It does not seek to supersede the home, church, or school, but to supplement these institutions, largely in the leisure time of the boy; and to impart by means of its own programs and exercises the virtues of chivalry, honor, and good citizenship. The character-building work of the movement is presented to boys in what is meant to be an "attractive wrapping." It is based largely on the method of learning by doing, in order that boys may be taught to be resourceful and self-reliant in all situations in which they may be placed.

The movement is nonsectarian and nonpolitical. Its program offers to the boy a well-rounded mental, physical, and moral experience, largely out-of-doors, and calculated to develop a love of country, God, and neighbor. For its success the movement depends upon the voluntary leadership of men of high ideals, who serve as scout masters and scout commissioners. The educational aspect of the work is emphasized by the fact that of the 7,067 men who held commissions as scout masters on December 31, last, about 65 per cent are college men and over 80 per cent have either a high-school or a college education; 1,655 give their occupation as clergymen and 790 as public-school teachers; others are professional men, journalists, students, or engaged in mechanical or mercantile pursuits. In practically every one of the 350 chartered councils the public schools are definitely represented through the service of the school superintendent on the executive board, and in many cases the school superintendent serves as president of the council.

A boy is first known as a "tenderfoot," and then becomes a "second-class," and later a "first-class scout." A first-class scout is eligible to merit badges in 58 different subjects, and may thus carry on his scout training under the supervision of this movement. From

February, 1911, to September of the present year, 39,176 merit badges have been awarded.

To obtain a merit badge for personal health a scout must:

1. Write a statement on the care of the teeth and show that his teeth are in good condition as a result of proper care.
2. State a principle to govern in eating, and state in the order of their importance five rules to govern the care of his health.
3. Present satisfactory evidence that he has not been absent from school or work for a period of at least six months as a result of his failure to observe these rules.
4. Tell the difference in effect of a cold bath and a hot bath.
5. Describe the effects of alcohol and tobacco on the growing boy.
6. Tell how to care for the feet on a march.
7. Describe a good healthful game, and state its merits.
8. Describe the effects of walking as an exercise.
9. Tell the dangers of overtraining in the various forms of athletics, and the advantages of specialization and an all-around development.

Among other tests are:

SCHOLARSHIP.

To obtain a merit badge for scholarship, a scout must—

1. Have been in attendance at one school—grammar, high, private, or night school—for a period of at least one year since becoming a first-class scout.
2. Present a certificate from the teacher or principal covering the same period and showing—
 - (a) That his attendance has been satisfactory;
 - (b) That his deportment has been above the average;
 - (c) That during the school year he has secured a satisfactory average in all of his studies.

PUBLIC HEALTH.

To obtain a merit badge for public health, a scout must—

1. State the chief causes and modes of transmission of each of the following diseases: Tuberculosis, typhoid, malaria.
2. Draw a diagram showing how the house fly carries disease.
3. Tell what should be done to a house which has been occupied by a person who has had a contagious disease.
4. Describe the method used in his community in disposing of garbage.
5. Tell how a city should protect its milk, meat, and exposed foods. State what are the laws in his community covering this subject, and to what extent they are being enforced.
6. Tell how he may cooperate with the health authorities in preventing disease.
7. Tell how to plan the sanitary care of a camp.
8. State the reason why school children should undergo a medical examination.
9. Produce satisfactory evidence that he has rendered service in some effort recommended by the public health authorities in the interest of public health.

From September, 1915, to September, 1916, the following are the number of merit badges won in the various subjects:¹

¹ Those marked with a star are considered especially educational.

*Agriculture.....	26	Bugling	98
Angling	5	*Business	78
Archery	2	Camping	397
*Athletics	299	*Carpentry	605
Aviation	17	*Chemistry	75
*Architecture.....	20	*Civics	393
*Art.....	74	*Cooking	451
*Astronomy.....	21	*Craftsmanship	704
*Automobiling	111	Cycling	429
*Bird study.....	187	*Dairying	9
*Bee farming	27	*Electricity.....	262
*Blacksmithing.....	58	*Firemanship.....	1041
*First aid	882	Pathfinding.....	493
*First aid to animals.....	524	*Personal health	1059
*Forestry.....	114	*Photography.....	21
*Gardening.....	177	*Physical development.....	155
*Conservation.....	114	Pioneering.....	404
*Handicraft	612	*Plumbing.....	12
*Horsemanship.....	39	*Poultry farming.....	101
*Interpreting	142	*Printing.....	33
*Leather work.....	17	*Public health	985
Life saving.....	459	*Scholarship.....	381
*Machinery.....	205	*Sculpture.....	5
Marksanship	101	Seamanship.....	30
*Masonry	57	Signaling.....	232
*Mining.....	25	Stalking.....	5
*Music.....	139	Safety first	44
*Painting	60	*Surveying.....	36
*Swimming.....	1191	*Taxidermy.....	11

During the year 1915, 11,978 merit badges were awarded. To September 1 of this year, 9,189 have been awarded.

The reading program of the Boy Scouts is a very large factor in the educational development of the work. It may be subdivided into two parts: (1) The magazine called "Boys' Life," published monthly, and (2) the book department.

Boys' Life is designed to give to scouts the best possible in stirring fiction. It seeks to portray boy life as it is with its natural and proper problems, pleasures, and excitement, discreetly casting a romance about the little things that are called commonplace, interpreting them in their powerful, but often forgotten relation to the boy and his destiny, and making boys happy; meanwhile keeping the stories clear of inaccuracies of fact, clear of those thrills that are degrading, and inspiring to higher aims and better effort. The "Lonesome Corner" of the magazine has developed a field whereby at the present time from three to five hundred letters are exchanged monthly through the editorial office between scouts in different States and countries, developing an educational benefit and the formation of friendships which is doing immeasurable good and bringing about a better international understanding, mutual appreciation, and good will.

The book department was organized to guard against the presentation to boys of stories too sensational, either because of gross exaggeration, or because of low standards of moralities, not to speak of immoralities or heroes unworthy either because of their low ideals or

because their life is not purposeful, not full of the right sort of ambition to make the most of themselves. The department is under Franklin K. Mathiews, chief scout librarian, working with a committee composed of George F. Bowerman, librarian, Public Library of the District of Columbia, Washington, D. C.; Harrison W. Craver, librarian, Carnegie Library, of Pittsburgh, Pa.; Claude G. Leland, superintendent, Bureau of Libraries, Board of Education, New York City; and Edward F. Stevens, librarian, Pratt Institute Free Library, Brooklyn, N. Y.

Last year the following resolutions were passed by the American Booksellers' Association:

Resolved, That the association approve the suggestion of the Boy Scouts of America for a country-wide canvass for better books for children, both by the cooperation of a special week in November and by an offer on our part to raise the standard of children's reading, as offered by our stores and by the publishers.

and by the Council of the American Library Association:

Resolved, That the Council of the American Library Association welcomes the aid of the library commission of the Boy Scouts of America in its efforts to improve the reading taste of the boys of the country; that the council of this association approves the plans of the library commission of the Boy Scouts for a week, when by vote of the American Booksellers' Association, the retail book trade shall place special emphasis on juvenile books, and that the council of this association commends this plan, as announced by the Boy Scouts of America, to the favorable consideration of the public librarians of the country.

From November 28 to December 4, 1915, the "Safety First Juvenile Book Week" was nationally observed. That the propaganda might be constructive a list of "Books boys like best" was prepared. The selection of 300 such books was made from over 1,000 volumes and divided into "Stories of adventure," "What and how to do books," and "Books of information." This list was first published October 23, 1915, in the "Publishers' Weekly." Thirteen thousand copies of the list were purchased by 31 booksellers, who represented by location every part of the country. Thirteen thousand copies were also purchased with special imprint by 42 librarians.

Since the incorporation of the movement in 1911, 665,900 copies of the Boy Scout Handbook have been sold in this country, 115,000 copies of them during the past year. Scout training courses have been developed at Columbia University, University of Virginia, University of California, University of Texas, University of Pittsburgh, Boston University, University of Wisconsin, Culver Military Academy, and in various schools. The East Greenwich Academy, Rhode Island, and the Fleet School of North Carolina have at various times offered scholarships in scouting. An educational department under the supervision of Dr. Jeremiah W. Jenks, New York

University, Dr. James E. Russell, dean of Teachers' College, Columbia University, and Dr. Norman E. Richardson, of Boston University, together with two or three other men to be appointed, who are actively connected with institutions of learning in the vicinity of New York, is in process of development. The activity and scope of this department as presented by the committee is as follows:

(1) Keep constantly before scoutmasters and others actively engaged in scouting helpful information and definite programs of practical assistance.

(2) Prepare and secure publications of articles explaining the scout movement, with a view to encouraging formation of troops and of securing volunteer service and financial support.

(3) Arrange for exhibits and personal appeals before various student bodies, educational and religious conventions and conferences, for men to serve as scoutmasters.

(4) Arrange for a course of reading or training courses for men who, in this way, volunteer to take up scout work at some future time.

(5) Develop plans, programs, and suggestions for boys' camps, with the hope that if finances permit, a man should be appointed to give all his time as national camp director.

A notable development in the recognition of scouting by educational authorities is the raising of the Pingree Memorial Fund of \$10,000 for the department of scout training in the Boston University. This course is now in operation, with Prof. Norman E. Richardson and Scout Commissioner Ormond E. Loomis as the lecturers.

The University of Texas grants annually two scholarships to "Eagle Scouts" in each community in the State which works under a local council of the Boy Scouts of America. Eagle Scouts are first-class scouts who have passed the merit badge tests in athletics or physical development, camping, civics, cooking, first aid, life saving, path finding, personal health, pioneering, public health, bird study, and any 10 others.

It is significant to note the attitude of educators toward scouting. As the scout program and methods of work are becoming better known, teachers in the public-school system throughout the country are using it more and more in connection with school work. Numerous troops have been organized by school principals. The board of education at Paris, Ill., has provided for the organization of a troop of scouts in every grammar and high school. Arrangements have been made whereby boy scouts can be given school credits for scout achievements. In Waco, Tex., scouting was found so beneficial to school discipline and esprit de corps that the superintendent of schools requested all boy scouts to wear their uniforms at all sessions. Dr. Charles W. Eliot, president emeritus of Harvard, says: "The Boy Scout Movement is setting an example that our whole public-school system ought to follow." Dr. James E. Russell, dean of

Teachers' College, Columbia University, says: "I regard the scout movement as one of the most valuable educational agencies of this generation."

GIRL SCOUTS.

By MONTAGUE GAMMON, *Executive Secretary.*

ORIGIN.

The plan of the girl scouts had its origin when 6,000 English girls applied for admission to the ranks of the boy scouts in England.

Sir Robert Baden-Powell requested his sister to found a similar organization for girls and the Girl Guides was the result. Mrs. Juliette Low, a native of Savannah, Ga., then living in England, became active in promoting the Girl Guides. She organized and directed her own troop. So delighted was Mrs. Low with the result of this work in England that she conceived the idea of transplanting the movement to her native America. Accordingly, troops were formed in Savannah, Ga., in March, 1912.

The movement has grown in a wholesome and normal way from the small beginning in Savannah to a national organization with troops in 250 communities. In 1915 a national convention was held and the business put in the hands of a national council. The executive committee is now composed of the following officers: National president, Mrs. Juliette Low; vice president, Mrs. Arthur Osgood Choate; national commissioner, Mrs. Theodore H. Price; deputy commissioner, Mrs. Snowden Marshall; treasurer, Edward H. Coy. The organization is incorporated, and national headquarters are maintained at 17 West Forty-second Street, New York City.

AIMS.

The Girl Scout program, presenting all of its activities in group work, preeminently fills a distinct need in the equipment of women for modern life.

In its requirements for the three grades of scouting and for the proficiency badges the organization is emphasizing the home-making occupations and virtues. Nursing and first aid occupy a prominent place in the training.

The motto "Be prepared" summarizes the plan. This means that plans shall be made in advance and that Girl Scouts shall be equipped with the proper tools, materials, and abilities for all eventualities that can be foreseen. They are to keep themselves in trim with a trained and vigorous body, an active mind, a happy heart, and devotion to the right, ready to do their duty to themselves and to the world. It

means, further, a distinct mental attitude, a philosophy of life, a feeling that, having lived worthily, they are masters when they come to the hard places in life's path.

Scouting meets the demand of nature for play and playtime and seeks to convert the use of this part of man's nature and time to character building and to sweetening the springs of life. The girl problem or the boy problem is inherently a leisure-time problem. Scouting has proved a powerful auxiliary to the church, school, and playground in meeting this difficulty. The ideals and activities of scouting capture the hearts of young people. It meets an appeal of their natures for companionship and for jolly times that contribute to the good of life.

ORGANIZATION.

There are three grades of scouts. To become a "tenderfoot," the girl must be 10 years old, know the 10 scout laws, how to tie four specified knots, the name of the governor of her State and mayor of her city, the history of the flag and how to fly it. More difficult tests are applied for admission to the second and first class grades.

After a girl is a "second-class scout," she becomes eligible for proficiency tests in one or more of the following subjects as she may elect: First aid, artist, athlete, attendance, automobile driver, aviator, bird study, boatswain, child nurse, clerk, civics, cook, invalid cook, dairy maid, electrician, farmer, gardener, personal health, public health, horsemanship, home nursing, housekeeper, interpreter, laundress, marksmanship, musician, naturalist, pathfinder, pioneer, photographer, scribe, signaler, swimmer, telegrapher.

The program of the weekly meetings consists of study and practice of the scout teachings and of recreation. The games and athletics are adapted to the physiological possibilities of women. At the present time there are 303 registered captains and troops, and approximately 6,000 registered girl scouts.

While the Girl Scouts organization is nonsectarian, it is distinctly religious. Each girl is expected to live up to the tenets of her particular church. She can not be a good scout unless she is faithful to her own religion.

CAMPFIRE GIRLS.

By Mrs. CECILIA FARWELL, Editor of "Wohelo."

Camp Fire has a system of honor giving, based upon seven crafts: Home craft, health craft, camp craft, hand craft, nature lore, business, patriotism. Honors are given in the form of beads, a different color for each craft. These honors are conferred at the ceremonial meeting of the group, which is called a "council fire." A girl re-

ports what she has done, and, whenever possible, submits for inspection of the group the thing for which the honor is claimed. When the work has been done in the home and is of such nature that it can not be brought into the council fire, the girl presents a statement from her mother. (This is optional in some camps; some guardians prefer the mother's statement, and others accept the detailed account from the girl). The beads which are won in this way are strung together in any fashion the fancy of the girl may dictate, and worn as a part of her ceremonial costume. Girls become very enthusiastic in winning these beads, and their honor string is shown with pride at council meetings, and every addition to it is treasured.

Mothers cooperate heartily in helping the girls to win the honor beads, and show special appreciation of new additions to their honor string. As in many cases honors are given for things which girls do not know how to do, and must first be taught, mothers are encouraged to give special instruction, that the work for which the honor is won may be as well done as possible.

Group teaching by mothers has been found to be the most effective way of working out this plan. For example, one mother who is especially good in making bread, will invite all the girls of a group to her home on Saturday and teach them how to make bread, while another, who excels in sewing, or some other form of home craft, will take them into her home for the next meeting.

This not only interests the girls, but it teaches domestic science and home making more effectively than in many schools. It is an incentive and spur to the mothers, brings the mothers and daughters into closer understanding and cooperation, and gives the girls a new respect and pride in their own mothers—a feature of the work of great importance, for it tends to community improvement in that each mother is spurred to have her own home and her own work appear to the best advantage. Girls also learn home arrangement and management by going into different homes and seeing how work is done.

While mothers are encouraged to cooperate in the winning of honors, the honors are actually awarded in the council fire in the presence of the group. This is one of the secrets of the success of Camp Fire. Each girl knows how difficult it is to do simple home tasks which to an adult appear merely in the light of duty. The girl who "hates to wash dishes" appreciates the fact that the other girl who stands in her place and receives an honor bead for having "washed and wiped dishes and left the dining room in order after one meal a day for two months" has won her bead through real effort. The girl who receives the bead knows that her mates appreciate how hard it was to win it, and the bead has a very real value

to her because of this fact. The honor is awarded not by an adult who feels that the girl has only done her duty, but by her mates, all of whom are in sympathy with her.

Many letters are received from mothers showing how this affects the girl's attitude toward her home work:

Mary no longer needs suggestions about the work of her room. She airs and makes her bed and does many other things she would not have attempted except for the stimulus of earning a bead.

The spirit of Camp Fire has been introduced into our home through Elizabeth's membership. She wants to do things which before were hateful and unpleasant to her, and does them not only carefully but cheerfully.

Honors are given in Camp Fire for other things than home craft, but all of these honors work indirectly toward giving the girls interest in home making and fit them to be better wives and better mothers.

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CHAPTER XXVIII.

EDUCATIONAL BOARDS, FOUNDATIONS, AND ASSOCIATIONS.

By HENRY R. EVANS,

Editorial Division, Bureau of Education.

I. EDUCATIONAL BOARDS AND FOUNDATIONS.

GENERAL EDUCATION BOARD.

Increased taxation for better schools, despite the financial depression in many districts of the South, and "perceptible improvement" in the Negro rural schools are emphasized in the report of the General Education Board for 1914-15.

Despite differences in local conditions, necessitating more or less variety of effort in different States, the Southern States are consciously working toward a single goal—an adequately organized, financed, administered, supervised, and manned State system of education.

The most important advance in State organization during the past year was made in Tennessee, where a long stride has been taken toward freeing education from politics. Hardly less important is the recent Alabama statute reconstructing the county board of education.

Attention may be called to the favorable action of the General Education Board on a request from the State superintendent of Mississippi for funds with which to initiate a model organization in a single Mississippi county. It was pointed out that if the present county appropriations were supplemented, great improvements capable of general introduction could be effected. The board appropriated \$3,000 for the purpose.

The year just passed has been a severe one on the financial side; yet in no State have backward steps been taken in the matter of taxation. The campaign for increased funds goes on, despite business depression.

The board has determined to enter the arena of educational research, and proposes, by means of agents—

to aid promising workers in the investigation of problems in educational theory and practice. It will undertake, from time to time, to make possible the preparation of scientific monographs, dealing with questions of educational policy and experience.

The board will prosecute to completion the experiments in the technique of handwriting and reading made by Dr. C. H. Judd, of the University of Chicago. A study of the schools of Gary, Ind.,

will be undertaken, and a handbook prepared to assist academic accountants to solve their difficulties.

According to the report of the treasurer made to the Secretary of the Interior, the financial operations of the board for the year ending June 30, 1916, were as follows:

The income of the Rockefeller fund for the year was \$2,065,736.42; the balance from the previous year was \$6,213,055.99, making a total of \$8,278,792.41 available for disbursement. The sum of \$1,012,368.75 was disbursed, leaving a balance of \$7,266,423.66 divided as follows: Balance payable on appropriations, \$6,511,006.52; amount available for appropriation \$755,417.04. Between June 30 and November 1, inclusive, the sum of \$1,036,582.96 will be collected, making the amount available for the appropriation at the October meeting, \$1,792,000.

It should be noted that in all previous reports, income which had accrued but which was not receivable until later dates was included in the amount available for appropriation. The figures here given include only income actually collected. Because of this change, income for the year was reduced by \$502,480.54.

The statement of appropriations of the Rockefeller fund for the year is as follows:

Universities and colleges for whites, for endowment.....	\$900, 000. 00
Medical schools, white	250, 000. 00
Colleges and schools for Negroes.....	127, 800. 00
Professors of secondary education.....	34, 130. 00
State agents of rural schools for whites.....	52, 300. 00
State agents of rural schools for Negroes.....	36, 133. 34
Negro rural school fund.....	10, 000. 00
County training schools for Negroes.....	10, 000. 00
Home makers' clubs for Negroes.....	33, 500. 00
Consolidated rural schools.....	25, 000. 00
Educational investigation and research.....	63, 993. 41
Conference.....	1, 018. 38
Supplemental fund.....	10, 000. 00
Farm demonstration work in Maine (including boys' and girls' clubs)	21, 500. 00
Farm demonstration work in New Hampshire (including boys' and girls' clubs).....	8, 500. 00
Total	1, 583, 875. 13

In addition to the foregoing, the sum of \$8,637.51 was appropriated from the income of the Anna T. Jeanes fund and \$50,000 from the principal of the Laura S. Rockefeller fund.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING.

The tenth annual report of the president and treasurer of the Carnegie Foundation for the Advancement of Teaching presents a statement of the usual current business for the year ending September 30, 1915, a discussion of problems relating to professional education, pensions for teachers, and the treasurer's report of income, expenditure, and endowment. The report shows a total endowment

of \$14,250,000, an accumulated surplus of \$1,255,000, and an annual expenditure of \$766,000. Of this, \$37,000 was spent in administration, \$55,000 in educational inquiry, and \$674,000 in retiring allowances and pensions. During the year 23 retiring allowances and 20 widows' pensions were granted, the average grant being \$1,550. The total number of allowances now in force is 327, the total number of widows' pensions 118, the general average being \$1,552. The total number of allowances granted since the beginning of the foundation is 639, the total expenditure for this purpose having been \$4,225,000.

The division of educational inquiry announces that 10 reports and 8 bulletins, a total of approximately 3,000 pages, have been published. Of these publications, some 200,000 copies have been distributed free of charge. Progress has been made in the three comprehensive studies undertaken by the foundation, viz, legal education, engineering education, and the training of teachers. The principal event of the past year in the study of legal education was the publication of the special report by Prof. Redlich, of Vienna, entitled "The common law and the case method in American university law schools." The report presents a carefully compiled list of law schools in the United States.¹

An attempt is made to correlate legal education with the conditions that it has to meet and with the general trend in the United States, extending over a long term of years, to better both the schools and these fundamental conditions. Detailed information has been collected regarding requirements for admission to the bar in all the States.

The study of engineering education, undertaken at the request of a joint committee representing the six national engineering societies and which has been carried on with the cooperation of these organizations, is nearing completion.² The report further presents a résumé of the legislative results of the foundation's investigation of education in Vermont and a study of the training of teachers in Missouri, undertaken at the request of the educational authorities of that State. An educational census of 18,000 teachers of Missouri was made. College charges for tuition by representative universities and colleges of the United States is another topic treated. In summarizing the data collected the report states that the tuition charges of representative institutions have increased during the last 10 years from about \$80 to about \$100 a year, and that the tendency to advance fees is increasing, along with the tendency to group all

¹ See Ch. XI.

² See Ch. XXI, Engineering Education.

of the charges of whatever kind in an inclusive fee based upon the amount of instruction that is taken.

The development of pensions for public-school teachers and university professors is discussed at length; also industrial and institutional pensions. An elaborate tabular statement of teachers' pension systems is presented.

"A comprehensive plan of insurance and annuities for college teachers," issued originally as a confidential document and afterwards given to the public, expresses the opinion that the present pension system of the foundation, together with other teachers' pension systems in the country, is unsound.¹

RUSSELL SAGE FOUNDATION.

During the past year the efforts of the division of education of the Russell Sage Foundation have been mainly devoted to the conduct of the educational survey of Cleveland, Ohio. This survey was conducted under the auspices of the Cleveland Foundation, which financed the work, and it was carried through under the direction of Dr. Ayres. In four significant characteristics the Cleveland Educational Survey departed from the methods that have been followed in previous studies of city school systems. The first of these is the extent and thoroughness to which it applied tests and measurements; the second, its method of submitting its findings to the local school authorities before publication; the third, the printing of its reports in a series of small monographs instead of in one large volume; and the fourth, the unusual efforts that were made to inform the public of the progress of the work while the investigations were under way.

In some respects the Cleveland survey is the most costly and extensive study of this character that has been carried through. The work began in the spring of 1915 and continued for some 14 months. The cost was more than \$40,000, and 25 specialists were engaged in the work. Several of these specialists were members of the regular staff of the Russell Sage Foundation.

In the application of tests and measurements to the study of educational processes and products, the Cleveland inquiries have been more extensive than those previously conducted elsewhere. The number of printed forms and blanks used exceeded 250,000. The number of individual spellings in the spelling tests exceeded 2,000,000; in the measurements of arithmetical ability the children of the Cleveland classes solved more than 3,000,000 problems; the tests of oral and silent reading were nearly 200,000 in number; and careful measurements were made of the speed and quality of some

¹ See Ch. VIII, Higher Education.

30,000 samples of handwriting. Other studies were carried through on a similarly extensive scale. Progress records were secured for 75,000 children, and in connection with the study of immigration individual information was secured from 84,000 pupils. All the schools in the city were visited and written reports were made on more than 1,500 classroom exercises.

During the conduct of the work persistent efforts were made to cooperate with the school authorities and to inform the public concerning the progress of the studies. As reports were prepared on each phase of the educational problems of the city, they were mimeographed and submitted to the superintendent of schools and the other educational officials most directly concerned, to members of the board of education, and to members of the local advisory committees. After sufficient time had elapsed to permit of a careful study of these reports, they were considered and discussed at a series of private meetings. These conferences resulted in clearing up many questions of fact and form in the tentative drafts of the reports and brought about many changes and corrections.

The division of education of the Russell Sage Foundation exists for the purpose of carrying on educational research on behalf of the children of the public schools. The work of the division is largely devoted to the study and development of scientific tests and measurements, to problems of school hygiene, and to problems of educational administration. The division publishes a series of reports in monograph form and sells them at prices sufficient to cover the cost of publication. It also has sets of lantern slides which it lends for use at lectures.

II. EDUCATIONAL ASSOCIATIONS.¹

NATIONAL EDUCATION ASSOCIATION.

The fifty-fourth annual convention of the National Education Association was held in New York City July 1-8, 1916. The larger and less technical subjects were discussed in the general sessions which took place in the afternoon and evening in the Madison Square Garden; the more special problems of education were treated in department meetings held in the various schools and educational institutions of the city. In addition, meetings of several associations more or less affiliated with the work of the association were held, such as the American School Peace League, the Association for the Wider Use of Schoolhouses, the Modern Language Conference, the American School Hygiene Association, etc. Particular emphasis was laid

¹ Accounts of other educational meetings are given in special chapters. A complete list of educational associations, National and State, will be found in the Educational Directory for 1916-17.

on social questions connected with education. David B. Johnson, in his presidential address on "The rural home and the farm woman," declared that the rural educational problem is wrapped up with the rural home and community problem.

Dr. P. P. Claxton, United States Commissioner of Education, delivered an address on "A national program of education," in which he declared that the time is fast approaching when stock should be taken of the multiplied and diversified educational agencies in the United States, so that some comprehensive policy can be adopted that will govern the administration of schools and colleges and universities. He expressed the desire that it might be possible to conduct a sort of educational experiment station where the new things in teaching might be examined and tested and the results given to the world. He also urged the establishment of a national university.

James W. Crabtree, president of the State Normal School of Wisconsin, emphasized the necessity for a teachers' training department in connection with a national university.

A Federal University of Commerce was advocated by Dr. Glen Levin Swiggett, assistant secretary general of the Second Pan-American Scientific Congress, at Washington, in his talk on "Educational preparation for foreign service."

Military training was advocated by Dr. Woods Hutchinson, in a paper on "First aid to the uninjured." He said:

Military training in the schools may prove the great emancipator that we have been waiting for to free our system of education from the clerical shackles and classical absurdities of the past and place it upon a hygienic, rational, and scientific basis.

Alvin E. Dodd, secretary of the National Society for the Promotion of Industrial Education, spoke of the need for vocational schooling and urged the passage of the Smith-Hughes bill by Congress. Mr. Joyner, State superintendent of schools of North Carolina, discussing the same topic, said that vocational preparation of the great industrial masses for more efficient and profitable work is not only an economic necessity in a democracy, but also a democratic right and obligation. Representative Simeon D. Fess, of Ohio, expressed his conviction that Federal aid for vocational education would pass both Houses of Congress in the very near future. He predicted eventual success, likewise, for the movement to establish a national university.

The departmental meetings varied widely in attendance and interest. Some were unusually good. The emphasis seemed to be less on the vocational aim in education and rather more on the adjustment of the elementary course of study to the changes going on in educational administration. The elementary section, for example, appears to have accepted the six-six plan of organization as definitely

assured; accordingly, the leaders were considering plans to modify the work of the first six years to make it accord with the junior high school. The kindergarten section broadened its discussions to include recent educational experiments, particularly those aiming to apply kindergarten principles to the other grades.

The following resolutions were adopted by the association:

Resolved, That the president of this association be authorized to name a committee of five active members, of which committee the president of the association shall be a member, to request the President of the United States to appoint a commission to investigate and report upon the condition of the women on the farm and of the rural home of the United States.

Resolved, That the National Education Association indorse the cooperative movement for the promotion of citizenship education inaugurated by the Bureau of Naturalization of the Department of Labor.

Resolved, That the National Education Association urge upon the Congress of the United States the appropriation of \$50,000, to be administered through the United States Bureau of Education for the purpose of disseminating information as to the methods, standards, and established practices in the education of immigrants, and in stimulating the extension of the necessary educational facilities looking to the Americanization of the foreign-born or alien residents of this country.

Resolved, That the National Education Association call the attention of the American people to the fact that teaching is a profession demanding for its successful practice a technical training that will put the teacher in possession of professional standards; that these professional standards can be maintained only by the employment of superintendents, supervisors, and teachers who have unquestioned professional qualifications for their work; that the members of the teaching profession can have and serve but one client—the public; that the public, therefore, owes a duty to itself and the members of the profession to see to it that only professional considerations enter into the employment, retention, and dismissal of teachers. The association believes that the public can elevate and strengthen the professional status of teachers and thereby serve itself by securing legislation that shall embody the following provisions:

1. The powers and duties of superintendents of schools should receive definition by legislative enactment. Definite professional qualifications should be required of all appointees to office. The term of the superintendent of schools should be not less than three years; the power of nominating all teachers and members of the educational staff should be given the superintendent.

2. The tenure of office of teachers should, after a probationary period, be permanent. Removal should be possible only for inefficiency, immorality, or grievous neglect of duty. Salaries should be fixed so as to insure to teachers a standard of living in keeping with the professional demands made upon them. Retiring allowances or pensions should be provided either by State or local action.

Resolved, That the National Education Association give expression again to the consciousness that the school is an institution developed by society to conserve the well-being of humanity, and that on this solid foundation all subordinate aims and uses of the school should be made to rest. Assembled as it is in a time of world-wide disturbance, doubt, and uncertainty, and of consequent national concern, the association affirms its unswerving adherence to the unchanging principles of justice between persons and between nations; it affirms its belief that the instruction in the school should tend to furnish the mind with

the knowledge of the arts and sciences on which the prosperity of the nations rests and to incline the will of men and nations toward acts of peace; it declares its devotion to America and American ideals and recognizes the priority of the claims of our beloved country on our property, our minds, our hearts, and our lives. It records its conviction that the true policy to be followed both by the school and by the nation which it serves is to keep the American public school free from sectarian interference, partisan politics, and disputed public policies that it may remain unimpaired in its power to serve the whole people. While it recognizes that the community or the State may introduce such elements of military training into the schools as may seem wise and prudent, yet it believes that such training should be strictly educational in its aim and organization and that military ends should not be permitted to pervert the educational purposes and practices of the school.

DEPARTMENT OF SUPERINTENDENCE.

The Department of Superintendence met in Detroit, Mich., February 21-26, 1916, with an attendance that broke all previous records. The principal feature of the opening session was the scholarly address by Dr. Nicholas Murray Butler, who touched upon the present world war and its social, political, and pedagogical significance to America. He said:

It seems to me that the American Nation, with all its imperfections, has at this time a contribution to make to the world that will be epochal in its effect. We have learned, as the world may learn, that one nation may be made out of 48 nations. We have learned, as the world may learn, that people of divers languages, customs, and religions may dwell together under one flag, providing each is given its due rights.

In the debate on the junior high school Dr. C. H. Judd, of the University of Chicago, expressed the opinion that the eight-year grammar school was a device of the English aristocracy to limit the education of the common people. President C. G. Pearse, of the Milwaukee Normal School, argued against the six-and-six plan, holding that the present school organization can be made the instrument of any readjustment which may be necessary in the present course of study. Prof. Bagley contended that a liberal education is more needed by those who enter the everyday occupations of life than by those who pursue professional careers.

Dr. J. George Becht, of the Pennsylvania State Board of Education, made an urgent plea for the Americanization of foreigners through the medium of the schools. He was followed by Dr. Cubberley, of Leland Stanford University, who urged the limiting of school-board activities to the control of schools rather than to their actual administration and supervision. A. E. Winship declared that he had little sympathy with "the preponderance of criticism leveled at school boards. For honesty, right intentions, and desire to conscientiously serve, there is no set of legislative bodies in America that compares with our school boards."

In the sessions for cities with a population over 250,000 and cities of the middle size, many interesting papers were presented for consideration, followed by animated discussions. W. S. Deffenbaugh, of the United States Bureau of Education, and Supt. W. E. Hoover suggested means of economical supervision in cities with a population under 25,000. O. G. Wilson, of Fairmount, W. Va., made a plea for the introduction of definite objective tests for measuring the products of school instruction.

In the round table for compulsory education and school census, John W. Davis, of New York City, urged the consolidation of the truancy and census departments. He thought industrial officers should not be local politicians but well-trained educational agents.

The convention was distinguished by the presence of three governors who have made notable successes as teachers, namely, W. N. Ferris, of Michigan; Martin G. Brumbaugh, of Pennsylvania; and F. B. Willis, of Ohio. Gov. Brumbaugh dwelt on the necessity of continuation schools and vocational education.

A report on "department activities," prepared by a committee of which Dr. C. E. Chadsey was chairman, was adopted. The committee urged that problems of school organization, curriculum making, and supervision shall form the principal subjects for discussion hereafter. To bring about greater continuity and concentration it was decided to appoint a committee each year to study some distinct phase of school work and make a report at the following annual meeting, the report to form the basis of discussion for a session or a day's sessions.

Resolutions were passed affirming the principles of democracy in education and the preparation of immigrant children and adults for the rights and duties of American citizenship. It was recommended that the president of the department be authorized to appoint a special committee to cooperate with the United States Bureau of Education and all other agencies in realizing this goal. The activities of the Federal Bureau of Education were heartily commended.

Dr. P. P. Claxton, United States Commissioner of Education, emphasized the need of practical education. He thought that the Detroit convention was the most important in the annals of the National Education Association.

He said:

In it three big ideas have made themselves dominant:

First. The idea that the high schools must shake off the grip of the college standard. We are realizing that of the 1,500,000 pupils in high schools, less than 350,000 ever get into the colleges, universities, or professional schools.

Second. The idea that high-school courses must be rearranged so that students can choose the subjects most helpful to the vocations they will follow. The "six-three-three" principle is fast winning favor in this connection, because the children begin to reason and exercise initiative at least two years before our

modern eight-grade system gives them the opportunity of choice and self-expression.

Third. The idea that our schools must do the lion's share of fitting the boys and girls for citizenship, training them to do their share in civic life, and to know the practical things of government and individual rights.

COUNCIL.

The subject of thrift teaching was discussed at length at the opening session of the council by S. W. Strauss and A. H. Chamberlain. Mr. Chamberlain said that the idea of thrift will make it possible to inject into the teaching of arithmetic, geography, and spelling many practical elements which have been lacking in the past. Other speakers treated the problem from the viewpoint of the committee which has been appointed to study the subject of thrift teaching in the public schools.

REPORT OF THE SECRETARY.

The following is the report of the secretary of the National Education Association, submitted according to law:

ANN ARBOR, MICH., *August 22, 1916.*

SIR: Complying with the provisions of section 4 of the act of incorporation of the National Education Association by Congress, approved June 30, 1906, the following is submitted as an annual report:

An office is maintained in the city of Washington at 662 E Street NE. in accordance with section 8 of the act of incorporation, but the association owns no property, real or personal, in the city of Washington.

The personal property of the association is largely in the form of volumes of proceedings, pamphlets, reprints, and office furniture, worth about \$12,000, all of which is in the custody of the secretary in Ann Arbor, Mich., where the business of the association is transacted.

The association has a permanent invested fund, referred to in section 7 of the act of incorporation, which is in charge of the board of trustees. This fund at the close of the fiscal year, June 30, 1916, amounted to \$188,500. The net revenue from this fund amounted to \$7,178.85, which was transferred to the treasury of the association for current expenses.

During the fiscal year ended June 30, 1916, the total receipts from all sources, including balance at the beginning, were \$42,529.55; the total expenses were \$37,157.67; the balance in the treasury June 30, 1916, was \$5,371.88.

The chief sources of revenue are membership fees, proceeds of sale of volumes and reports, and income from the invested fund.

The chief items of expense are the printing and distribution of the annual volumes, the maintenance of the secretary's office, and the expense of preparing for and conducting the annual convention.

The usual appropriations for educational investigations were made at the time of the convention, which was held in New York City July 1 to 8, 1916.

The following general officers were elected for the ensuing year: President, Robert J. Aley, of Orono, Me.; vice president, David B. Johnson, of Rock Hill, S. C.; treasurer, Thomas E. Finegan, of Albany, N. Y.

The executive committee for the ensuing year will be constituted as follows: President, Robert J. Aley, president University of Maine, Orono, Me.; first vice president, David B. Johnson, president Winthrop Normal and Industrial Col-

lege, Rock Hill, S. C.; treasurer, Thomas E. Flanagan, assistant commissioner of education, Albany, N. Y.; chairman of trustees, Carroll G. Pearse, president State Normal School, Milwaukee, Wis.; member by election, George B. Cook, State superintendent of public instruction, Little Rock, Ark.

The board of trustees for the ensuing year will be as follows: Chairman, Carroll G. Pearse, president State Normal School, Milwaukee, Wis.; secretary, James Y. Joyner, State superintendent of public instruction, Raleigh, N. C.; Walter R. Siders, superintendent of schools, Pocatello, Idaho; Agnes E. Doherty, teacher, Central High School, St. Paul, Minn.; Robert J. Aley, president University of Maine, Orono, Me.

I am, respectfully, yours,

DURAND W. SPRINGER, *Secretary.*

HON. P. P. CLAXTON,

Commissioner of Education of the United States,

Washington, D. C.

ASSOCIATION OF AMERICAN UNIVERSITIES.

The seventeenth annual conference of the Association of American Universities was held at Berkeley, Cal., August 27-28, 1915. A paper on "Faculty share in university control," prepared on behalf of Columbia University by Dr. Dewey, was read by C. J. Keyser. The writer suggested some of the reasons for giving the teaching body in universities a greater share in the control of university policies and then formulated a method by which this might be brought about.

If the legislative prerogatives of faculties were extended, there might well be an elected administrative committee (subject to recall), which should have large discretionary powers in administrative details. * * * In all matters relating to the progress of students the faculty might well confine itself to legislation on broad principles and leave to its administrative commission the working out of specific details.

Dr. Dewey's paper evoked considerable discussion. A. O. Leuschner, on behalf of the University of California, presented a paper on "The organization and budget of the graduate school and its relation to the other schools of the university," in which he drew the conclusion that the complete separation of the graduate school in organization and budget is not desirable in American universities and that it is most advantageously organized as a horizontal section of the university, including all schools as far as matters of graduate study and research and higher degrees are concerned. A paper on "Questions relating to outside remunerative work by professors" was presented on behalf of Leland Stanford Junior University by Charles D. Marx.

The report of the committee on bibliography of university and college publications was adopted and \$500 was appropriated to carry out the plans formulated. The method of the proposed catalogue is that of the Publishers' Trade-List Annual, each institution

cooperating furnishing 500 copies of the list of its own publications printed in a uniform size suitable for binding together.

The report of the representative of the association to cooperate with the United States Bureau of Education regarding the question of the classification of American colleges was received and filed.

Two sessions of the Conference of Deans and Other Administrative Officers of the Graduate Schools were held in connection with the meetings of the association. Resolutions were adopted regarding the master's degree, which were afterwards amended by the association as follows:

Whereas the Association of American Universities in its twelfth annual conference tended to favor the idea that the master's degree should be granted only for work of graduate character;

Whereas discussion among the deans of the graduate faculties reveals wide variation of practice on this point as well as with reference to residence requirements for this degree: Therefore

Resolved, first, That it is the sense of the meeting that the association shall reaffirm its belief that the master's degree should stand for at least one year of bona fide graduate study; *second*, That all institutions in this association should maintain a minimum residence requirement of one year; and *third*, That when candidacy for the master's degree is conducted through summer sessions the required work should be the full equivalent of that otherwise required for the degree sought. The resident work in such candidacy should be in amount not less than five summer sessions of six weeks' duration.

The deans' conference recommended that a committee be appointed to report to the association on the subject of academic and professional higher degrees, which was adopted.

NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS.

The twenty-first annual meeting of the North Central Association of Colleges and Secondary Schools was held in Chicago, Ill., March 24-25, 1916. The association has two subsidiary bodies—the committee of high-school inspectors, and the commission on accredited schools and colleges. The first works for the institutions and for the State departments of education in the States which are covered by the association. The commission presented a report dealing with 1,139 schools, 927 of which had its unqualified approval; 89 were warned “to mend their ways”; 13 were recommended to be dropped; and 92 new schools were placed upon the approved list. The report of the commission was not received with entire approval by the association, for several schools that had been refused membership appealed, and in a number of cases the appeal was sustained.

Dean Thomas A. Clark, of the University of Illinois, delivered an address in which he emphasized the importance of the personal touch between the instructors and the students, particularly between the instructors and the freshmen students. President David Felmley, of

Illinois Normal University, spoke on "What is the reasonable limit to which an institution may go in enrolling students in the first and second years and yet retain the right to be classified as a senior college?"

ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS OF THE SOUTHERN STATES.

The twenty-first annual meeting of the Association of Colleges and Secondary Schools of the Southern States was held at Nashville, Tenn., October 28-29, 1915. Dr. S. P. Capen, specialist in higher education, United States Bureau of Education, presented a paper on "Measuring college standards and efficiency," in which he discussed the work of the committee on higher educational statistics, composed of delegates of national and sectional associations representing higher educational institutions. This committee, which is cooperating with the Federal bureau, met in Washington, in May, 1915, and decided to undertake a critical survey of colleges and universities without attempting to divide institutions into classes such as Class I, Class II, Class A, Class B, etc. Dr. Capen emphasized the point that this study was not intended to be a classification; it would merely furnish the data for classifications which any agency might choose to make.

Miss Emily H. Dutton, speaking on the same subject, dwelt on conditions in southern colleges. J. D. Elliff read a paper on "The junior college: The Missouri plan," in which he discussed the efforts of the University of Missouri to standardize the work of a junior college and to accredit such institutions as met the requirements. The subject of "Quality credits" was treated by H. C. Tolman. Charles G. Maphis read a paper on "A plan for the definite rating of secondary schools," in which he contended that the schools should take the initiative in the matter, and then seek the cooperation of the colleges. "College credit for school work" was discussed by William H. Hand, who dwelt on the advisability of giving freshmen credits for work distinctly within the four-year high-school course or by giving such credits for courses extending beyond the high-school course.

The report of the commission on accredited schools was presented by the chairman, J. S. Stewart.

The recommendation of the executive committee regarding the membership of the association was adopted. This recommendation, which is an amendment to the constitution, makes the membership consist of four classes: (1) Colleges and universities, (2) junior colleges, (3) schools, (4) individuals.¹

¹ See Ch. VIII, Higher Education.

LAND-GRANT COLLEGE ENGINEERING ASSOCIATION.

The fourth annual convention of the Land-Grant College Engineering Association was held at Berkeley, Cal., August 11-13, 1915. The presidential address was delivered by H. W. Tyler, who emphasized the importance of concentrating attention on the engineering experiment stations. The special committee on fees for professional (engineering) services in land-grant colleges called attention to the entire absence of uniformity in methods for handling commercial work at land-grant institutions. At one extreme is the advocate of free service for the citizens of a State, similar to that rendered by the agricultural and extension departments; at the other is the professor who thinks that private practice is purely a personal affair and that the laboratory management should be similar to that of a commercial testing laboratory.

A. W. Richter read a paper on the "Adaptation of engineering to local needs," in which he said that no engineering college can afford to maintain courses covering all of the various specialties. In addition to the general courses of civil, electrical, and mechanical engineering, each institution should endeavor "to meet only its special needs by offering such additional courses as will tend to produce men most capable of leading in the development of the special resources of its own State."

A paper by O. V. P. Stout on "Lessons to be drawn from the experience of the agricultural experiment stations" considered the functions, relations, organization, policy, and procedure of the agricultural experiment stations of this country, and how far such activities applied to the work of engineering experiment stations already organized or to be organized in the land-grant colleges.

Other papers were presented by G. A. Covell and F. E. Turneure. The paper by O. L. Waller took the form of a proposed bill, establishing engineering experiment stations, using throughout the phraseology of the Hatch Act, substituting the words "mechanic arts" for "agriculture" and stating the proposed objects and duties in somewhat different language. The executive committee was authorized to take steps to promote the campaign to secure Federal aid in the interests of engineering experiment stations.

ASSOCIATION OF COLLEGES AND PREPARATORY SCHOOLS OF THE MIDDLE STATES AND MARYLAND.

The twenty-ninth annual convention of the Association of Colleges and Preparatory Schools of the Middle States and Maryland was held in Philadelphia, Pa., November 26-27, 1915. President Isaac Sharpless, of Haverford College, deprecated military training

in schools and colleges. In the general discussion that followed his address, President Thomas Fell, of St. John's College, Annapolis, Md., spoke in favor of such training. The subject of "Athletics in schools and colleges" was treated by Dr. D. A. Sargent. Prof. Roger B. Merriman, discussing the "Use of the comprehensive examination in college education," said there were two basic ideas closely related to one another, which underlie the plan of a comprehensive examination, the main feature being that it is an examination, not of a course, but in a field of knowledge.¹

The report of the committee appointed to investigate the comparative records made by students admitted to college on examination and on certificate, respectively, was submitted, accompanied by elaborate statistical charts. A number of colleges for women, in addition to several colleges for men, were examined. In particular Mount Holyoke, Smith, Vassar, and Wellesley, at a very considerable expenditure of time and labor, furnished the desired data. In giving the results of its work, the committee decided not to indicate the identity of the several colleges.

NATIONAL CONFERENCE ON IMMIGRATION AND AMERICANIZATION.

The first National Conference on Immigration and Americanization was held in Philadelphia, January 19-20, 1916. It was organized by the national Americanization committee for the purpose of discussing economic, social, and educational work among immigrants. Letters were sent to the governors and mayors of towns with a large immigrant population and to various associations inviting them to send delegates to the conference. The first session consisted of the opening of an art exhibit, showing the contribution of foreign-born races to art in America, held in Memorial Hall.

Addresses were made by Gov. Brumbaugh, S. Stanwood Menken, Felix M. Warburg, Mary Antin, Dr. P. P. Claxton, Louis F. Post, Mrs. P. V. Pennypacker, Edmund von Mach, Grace Abbott, Dr. Corrigan, Stephen S. Wise, Theodore Roosevelt, and others.

The *Immigrants in America Review*, the official organ of the committee for immigrants in America, New York City, in summing up the work of the congress, says:

The most significant results of the conference are that for the first time philanthropic, business, civil, and educational organizations were brought together to discuss Americanization as it affects them all; that Americanization was recognized as a national movement and responded, requiring national standards; and that one and all organizations governmental and private, of all kinds and all creeds, and of varying methods of work, pledged themselves to cooperate in carrying out Americanization as a national work.²

¹ See Ch. VIII, Higher Education.

² See also Ch. XX, Immigrant Education.

AMERICAN FEDERATION OF ARTS.

The seventh annual convention of the American Federation of Arts was held in Washington, D. C., May 16-18, 1916. Dr. Charles D. Wolcott, secretary of the Smithsonian Institution, delivered the address of welcome. Senator Newlands, of Nevada, who spoke on "Art and the people," strongly urged all art organizations of the country to assist in the formation of public sentiment regarding art matters. He dwelt on the development of art as one of the highest functions of the Government, involving not only education in art but its practical application to all material things with which the Government has any concern. He advocated the creation of an art commission with "some real power connected with the National Government."

Robert W. De Forest, of the Metropolitan Museum of Art, New York City, president of the federation, discussed the best means of promoting the introduction of art into the home, and the part to be played by the federation in furthering the means of supplying the ever increasing cravings for objects of art of the American people. He tentatively recommended traveling exhibits of artistic photographs, prints, casts, ceramics, etc., which could not only be seen but purchased for reasonable amounts.

Miss Leila Mechlin, secretary, emphasized the national character of the organization and told of its existing traveling exhibits, its circulation of illustrated art lectures especially adapted to general audiences.

Among the services of an extraordinary character performed by the federation within the past year she mentioned its work in obtaining the lowering of the prohibitive rates charged for the transportation of paintings under the Cummins bill, etc.

ASSOCIATION OF AMERICAN LAW SCHOOLS.

The fifteenth annual meeting of the Association of American Law Schools was held at Chicago, Ill., December 28-30, 1915. H. S. Richards, in his presidential address on "Progress in legal education," advocated an aggressive policy on the part of the association to bring about a uniform standard for admission to the bar throughout the United States, and the securing of an efficient administration of that standard. He urged the adequate study of the history of American law, and a comparative study of the basic juristic principles of all the great systems of law.

There was an extended discussion by H. F. Stone and F. C. Woodward of the report made by Prof. Redlich, for the Carnegie Foundation, as one of the features incident to the investigation of legal education in this country by the Foundation. The third session of

the association was given over to a discussion of the extent to which contemporary legislative problems should be dealt with in law schools, and the method of presenting those problems. J. H. Wigmore, of Northwestern University, presented the matter in the form of an actual demonstration of the operation of a class conducted in accordance with his views. He was assisted by Mr. Hoffman, a student at the Northwestern University law school, class of 1916. At the close of the demonstration Prof. Wigmore called upon George F. Wells, of the University of North Dakota, to explain the course in legislation offered in his institution. Prof. Freund, who was not present at the meeting, submitted a memorandum of the course at the University of Chicago, which was read by the secretary.

Various round-table conferences were held, at which were discussed the following topics: Evidence, contracts, property, and procedure.

The following resolution was passed by the association:

Whereas there is a recognized demand for greater attention to the scientific and constructive work in jurisprudence in addition to the fundamental work of training men for the bar;

Whereas the recommendation of the president of this Association of American Law Schools that a center be established in Washington, or elsewhere, for the constructive advanced work in jurisprudence brings this purely juristic purpose of legal education directly before this association; and

Whereas it is advisable to bring together for analysis and discussion the various plans and ideas relating to this recommendation: Therefore, be it

Resolved, That this association cooperate with those suggesting these plans and bring into focus the various ideas for advanced work in jurisprudence for formal consideration, and to this end it is moved that the association shall now appoint a committee of three on the plan for a juristic center, the chairman to be the retiring president, Mr. Richards, which committee shall investigate this project of an independent center for constructive and advance work in jurisprudence, collect the data, invite plans, suggestions, and criticism, and digest the result in a report, with its own recommendations, which report and recommendations shall be presented at the next regular meeting of this association.

HARVARD TEACHERS' ASSOCIATION.

The Harvard Teachers' Association met in Boston, March 11, 1916. Charles A. Prosser delivered an address on "Education as preparedness," in which he laid emphasis on the necessity of securing a system of education adapted to the genius of the American people. He remarked that two phases of the use of education as preparation for a stronger and safer country appealed to him, viz: (1) The use of the schools to develop the latent possibilities of all our future citizens; (2) the use of the schools to develop a better patriotism among our future citizens. W. C. Bagley treated the subject of "Some handicaps to education in a democracy," in which he ex-

pressed the conviction that education in this country can not serve the people with "a maximal measure of efficiency until the people themselves decree that effective sanctions, recognitions, and rewards shall accrue to unusual success in teaching as such." "Our national shortcomings in education" was discussed by David Snedden.

CATHOLIC EDUCATIONAL ASSOCIATION.

The thirteenth annual convention of the Catholic Educational Association was held at Baltimore during the week of June 26, 1916. A paper read by the Rev. J. W. Maguire, of St. Viator College, urged that sociology should become a part of the curricula of Catholic colleges. Other topics were: "The Gary plan;" "Some ends in elementary education;" and "Education from a Catholic standpoint." Cardinal Gibbons was a guest on the last day of the convention. In speaking of the instruction of children as the most important thing to attract leaders of thought, the cardinal said:

Knowledge is power, but that power is only beneficial when it is directed toward righteous ends. The progress and prosperity of the church in America is to be gained not only by the increase of its adherents, but still more by the improvement and the growth of our Catholic schools.

At a meeting of the parish school department, papers were read upon "The lesson plan"; and "The problem of feeble-mindedness."

SOUTHERN ASSOCIATION OF COLLEGE WOMEN.

The thirteenth annual meeting of the Southern Association of College Women was held in Montgomery, Ala., April 13-15, 1916. Elizabeth Avery Colton, in her presidential address, said that a college, according to President Wilson, should "subject its students to general intellectual training—narrowed to no one point of view, to no one vocation or calling"; consequently the association is making every effort not so much to change the present tendency to emphasize vocational training for women as to differentiate technical training of all kinds from college training. She remarked:

We realize fully that the South needs more industrial and general finishing schools for women than liberal-arts colleges; and for that reason we urge our nominal colleges to give up their false claims, and try to become good preparatory, or trade schools. We need especially institutions like Pratt and Drexel, whose distinctive object is to give thorough professional and technical training. But we also need more colleges like Vassar and Wellesley, whose distinctive object is to give a liberal education—to inculcate the spirit of scholarship. We are therefore encouraging our six standard colleges to leave to normal schools, to State universities, and to conservatories of music technical training in vocational subjects and in fine arts, and to devote themselves to the distinctive work of liberal education as set forth in President Wilson's ideal of what a college is for.

Dr. W. W. Guth, president of Goucher College, delivered an address on "First things first," which was a plea for individual training. The report of the committee on standards of colleges was presented by the chairman, Emily H. Dutton.

NORTH CENTRAL COUNCIL OF STATE NORMAL SCHOOL PRESIDENTS.

The North Central Council of State Normal School Presidents met in Chicago, Ill., February 18-19, 1916. The general theme of the meeting was "Greater educational leadership for State normal schools." Carroll G. Pearse spoke of the growth of the council as a most helpful sign, and thought that a national organization should be formed to meet annually to consider important educational problems relating to normal schools. Dr. Charles H. Judd urged the classification of higher institutions of learning, and W. S. Dearmont discussed the work of normal schools in the field of productive scholarship. The address by Dr. Linus W. Kline on "What phases of psychology should be taught in normal schools and what amount of time should be devoted to the subject?" was an able presentation of a difficult problem. He cited the following reasons for the unfavorable attitude toward psychology:

1. The advantages of a knowledge of psychology to the art of teaching have been urged in extravagant language and the claims set forth have unduly raised the hopes and expectations of prospective teachers and the uncritical public.
2. Psychologists are too disputatious and often allow their zeal and partisanship for secondary matters to becloud or set aside problems of primary importance.
3. The limited time usually devoted to psychology in normal schools necessitates the presentation of its laws in a more or less dogmatic fashion. Undue emphasis is placed upon structure and the corresponding neglect of the functional and relational aspect of mind.
4. The fourth factor that tends to disappoint our expectations in the benefits of psychology consists in certain intrinsic difficulties of the science itself and in the age and limited preparation of the student for grappling with it.

NATIONAL FEDERATION OF STATE EDUCATION ASSOCIATIONS.

The National Federation of State Education Associations met in connection with the Department of Superintendence at Detroit. Over 30 States were represented.

President Foos delivered the address of welcome, in which he outlined the scope and work of the federation, stating that the federation was a clearing house for the various State associations, and urged that there be a free interchange of opinion on the paramount problems of the several State associations. He argued that the function of the federation was to disseminate helpful information for the use

of the State bodies. He advocated a simpler constitution and recommended that a committee be appointed to draw up a constitution.

A. H. Chamberlain, of California, urged that the organization of the federation be simplified and made more democratic; and Dr. Alfred C. Thompson, of New York, suggested State delegate memberships to make the membership more permanent.

Dr. M. Bates Stephens, State superintendent of Maryland, reported for the Maryland association and suggested that all State associations be made branches of the federation. He urged that the federation be made a clearing house for the State associations, and that the work of the federation be reported back to the various State bodies by members present.

G. W. Briles, president of the State Education Association, Ada, Okla., thought there should be a concerted effort in the various State associations and advised that each State association do some specific thing each year.

W. W. Thomas, president of the State Teachers' Association, Columbia, Mo., spoke of the importance of getting suggestions at this meeting which would help the various State association officers. He told of the association work of Missouri, plans of raising money, and the efforts of the Missouri association to secure a constitutional convention.

M. A. Bursewitz, secretary of the State Teachers' Association, Milwaukee, Wis., reported on the work of the Wisconsin Teachers' Association, saying that his association had attempted the work of writing the educational history of the State.

Dr. W. B. Owen, of Chicago, Ill., discussed the question as to how the State association may be an integral part of the National Education Association. He thought the work of the National Education Association should be conducted by delegates selected by the various State associations and that they should be responsible to the State associations.

A. H. Chamberlain, secretary of the California Teachers' Association, San Francisco, Cal., discussed the plan of State association work, suggesting that States be divided into general working units or centers, and that each of these centers be made a division of the State association. He said that each of these centers in California elected delegates to a State council and that this State council had in charge the general business of the teachers' association of California. He stated that the council meets annually and that it has general charge of financial and legislative matters. He gave a full report of the work that the California association had done in legislative matters, mentioning the teachers' fund and the longer tenure of office, the teachers' registration bureau, to take the place of the teachers' agency, and other things helpful to the teachers that had

been secured. He said that the council unified the programs of all the various sectional associations. The budget of the California association, he remarked, amounted to about \$25,000.

CONFERENCE ON RURAL EDUCATION.

The fourth annual Conference on Rural Education was held at Worcester, Mass., June, 1916. William B. Aspinwall opened the conference with a discussion of the rural school as the community center, in which he stated that the community center was one of the best means of revealing to a community not only its wealth of educational and socializing resources, but also its splendid opportunity of vitalizing and invigorating the work of the school. Mason S. Stone, commissioner of education of Vermont, in his address on "The restoration of country life in New England," cited three main causes which have produced the exodus from the countryside and the resultant conditions: (1) Financial opportunities, (2) isolation, and (3) schooling. Interesting papers on the rural school as the community center were read by G. A. Works, David Snedden, Kenyon L. Butterfield, and Edward J. Ward. H. O. Clough discussed "Community activities and supervision of country schools in Connecticut."

NATIONAL ASSOCIATION OF SCHOOL ACCOUNTING OFFICERS.

The fifth annual convention of the National Association of School Accounting Officers was held at Des Moines, Iowa, May 16-18, 1916. The report of a committee on the standardization of school building measurements and cubical contents was presented, which suggested a plan for classifying school edifices according to use and construction, for classifying cost units on the basis of pupil capacity and cubic contents, and for classifying building costs. It precipitated much discussion. Objection was made to the classification of grading, fences, etc., as a part of the cost of a school site. The report and a graphic chart prepared by E. C. Baldwin were adopted by unanimous vote. The data will be submitted to prominent architectural, engineering, and building associations for concurrence.

Some of the questions discussed by the convention were the following: Can educational service be measured, and can the results of this service as expressed in the lives of the children and of the communities be stated definitely? The general opinion was expressed that values and costs are closely related, but that there are, at the present time, no known means of fixing such values, inasmuch as they involve factors—spiritual, moral, and intellectual—which

do not bear definite quantitative measurement from a utilitarian and material standpoint. Dr. George Gerwig, however, thought that the school will pay dividends in proportion to its function and use. He advocated the possibility of the final evolution of a scheme of evaluating and separating the elements of service. He held the need of going beyond mere costs to be vitally necessary.

August Hiller discussed the subject of school surveys and finance. Charles O. Case presented a detailed outline and blank forms of a system of accounting devised by the New York State Education Department for the school boards of New York, which will be compulsory throughout the State after August, 1916. Lewis E. Larson delivered an address on the "Functions of the business department of the school board as an aid to the education department." William Dick read a paper on "Constructive economy."

NATIONAL CONFERENCE OF CHARITIES AND CORRECTION.

The forty-third annual meeting of the National Conference of Charities and Correction was held in Indianapolis, Ind., May 10-17, 1916, with a record-breaking attendance. Federal aid to education was urged by Mrs. Florence Kelley, general secretary of the National Consumers' League. She said: "For want of Federal aid in vast areas, larger than the territory of whole European nations, schools are lacking or are held in cabins and hovels for a few weeks in the year, taught by incompetents and giving the children the least possible education."

EASTERN ARTS ASSOCIATION.

The Eastern Arts Association convened in Springfield, Mass., on April 20-22, 1916, with a large attendance. Papers on the decorative arts predominated at the general sessions. Dr. David Snedden made a plea for clearer definitions for our terminology in the arts. Vesper L. George presented a paper on "Problems in interior decoration."

Arthur Allen discussed the problem of bridging the gap between the modern art school and the business world; and Miss Sarah Louise Arnold spoke of the necessity of teaching household arts practically. The need and opportunity for more color printing as art problems in the schools was emphasized by Arthur W. Dow.

Round-table meetings were organized for technical, mechanical arts, and industrial art high-school teachers, manual-training teachers, household-arts teachers, art teachers, vocational-school teachers, and industrial-training teachers for special teachers.

At the second meeting of the college and normal-school section, established a year ago by Miss Mabel Soper, of Bridgewater Normal School, Mass., Dr. Snedden said that the modern tendency in art

education is a way from drawing and representation as the objective and toward the training of all in appreciation. He declared:

Appreciation is to be gained in some measure by drawing, designing, and construction in order to establish intelligent understanding of beauty, but much more by the handling of real objects of beauty, for purposes of choosing and estimating between good and not so good, between the well designed and the poorly designed.

NATIONAL ASSOCIATION OF PRINCIPALS OF SECONDARY SCHOOLS.

The National Association of Principals of Secondary Schools was organized at Chicago, Ill., on April 15, 1916, the purpose being to provide a time and place where the high-school principals might discuss and confer about their common interests, especially the peculiar problems relating to supervision and management in secondary schools—problems which, as the *American School* (May, 1916) states, have “never received consistent, methodical, and thoroughgoing consideration.”

NATIONAL LEAGUE OF COMPULSORY EDUCATION OFFICIALS.

The fifth annual convention of the National League of Compulsory Education Officials was held at Milwaukee, Wis., November 18–20, 1915. Many interesting papers were read, among them being the following: “How compulsory education laws could be strengthened,” by W. S. Deffenbaugh, of the United States Bureau of Education; “The delinquent girl question,” by Mary Bartelme; “Should shoes and clothing be furnished indigent school children by public or private funds?” by C. A. McCall; “The child at school and the child at work,” by Anne Davis; “The widening scope of attendance promotion,” by J. B. Quinn; “Constructive agencies of education,” by John D. Shoop; and “Mothers’ pensions,” by Joel D. Hunter.

The following resolutions were among those adopted:

Resolved, That we favor special rooms or classes, parental schools, continuation, trade, and technical schools for incorrigible children.

Resolved, That the experience and advice of attendance officers should be utilized in securing to children that vocational guidance which is essential to the safe transit from school to industry.

Resolved, That each attendance department should have charge of the permanent school census and the issuance of age and schooling certificates or work permits.

Resolved, That we favor a more liberal provision for parks, playgrounds, and social and recreation centers for the youths engaged in daily occupation, as a substitute for unwholesome places of amusement.

Resolved, That we favor the compulsory attendance at school of children up to 16 years of age, and the granting of age and schooling certificates to children of 14 years of age who have completed six yearly grades, and compulsory attendance of such certificated children at continuation schools for at least five hours a week during the days the public schools in the district are

in session until they have completed the eighth yearly grade or have attained 18 years of age; and that continuation schools be under the control of the board of education of the school district.

Resolved, That free transportation of crippled and blind children to our public schools be accorded.

Resolved, That we favor a transfer system to trace children who leave one school to attend another.

Resolved, That the plan of the Bureau of Immigration of notifying the school authorities of the arrival of the children of immigrants meets with our approval, and we recommend the tracing of all children who transfer between schools in the same or different cities.

Resolved, That we favor the dropping of the child's name from the school register only upon the recommendation of the attendance department, or if it shall be shown to the satisfaction of the board of education of the school district that the mental or bodily condition of the child is such as to prevent his or her attendance at school, or unless such child shall have been granted an age and schooling certificate or work permit.

Resolved, That we again favor uniform marriage and divorce laws to protect childhood.

MUSIC TEACHERS' NATIONAL ASSOCIATION.

The thirty-seventh annual meeting of the Music Teachers' National Association was held in Buffalo, N. Y., December 28-30, 1915. The presidential address, delivered by J. Lawrence Erb, emphasized the fact that while music as an art is firmly established in a large proportion of the educational institutions of the United States, *music as an educational force*—as a mental discipline, for instance—is grudgingly admitted in only a few. He said:

In other words, while educators are ready to admit—what they can not fail to realize—the value of music as an accomplishment, as a social entertainment, as a community asset, they are skeptical of its worth in the processes of education, of *drawing out* by disciplinary process what is in a student and schooling the faculties for use in the everyday world.

Prof. Erb dwelt on the lack of coordination between the music teacher and his work and the other educational forces, public and private.

In the public-school conference Karl W. Gehrkins presented a paper on "Training the music supervisor," and Will Earhart discussed "Some present usages in accrediting music in high schools."

The report of the standardization conference revealed the fact that the evolution of standardization seems—

to follow a somewhat fixed formula, beginning always with attempts to *line up* the teachers of the State (or smaller district) with examinations and certifications. Several States have attempted to bring this about by legislation, but have found the lawmakers rather unresponsive. In States like Kansas, Illinois, Missouri, and Minnesota, where the State associations conduct the examinations and issue the certificates, results seem to appear, though slowly. Much more is being accomplished by ignoring the teacher's credentials, but keeping close scrutiny upon his work. This seems to be the logical manner of solving the problem.

RELIGIOUS EDUCATION ASSOCIATION.

The Religious Education Association, which met in Chicago, Ill., February 28 to March 1, 1916, discussed the general subject of religious instruction and public education. To better correlate these interests, preparatory studies had been inaugurated in different parts of the country. Four problems were considered by the conference: (1) Is such correlation desirable? (2) What should be the curriculum of religious instruction? (3) How can week-day religious instruction be organized? (4) Where may teachers be obtained? It was generally recognized that religious instruction belongs to the home and the church, and not to the public school. Religious education is the indubitable right of every child, and it is proper for parents and school officials to reach such agreement as may make it possible for the children to attend schools of religion at certain periods of the day. But this should be an agreement between the citizens and the public school authorities, and not between the school and the church. The church as an institution should not interfere. The fact was developed at the conference that there is much to be accomplished among Protestant bodies in formulating a curriculum of religious education. The following declaration of principles was announced:

1. The church and state are to be regarded as distinct institutions, which, as far as possible, cooperate through the agency of their common constituents in their capacity as individual citizens.

2. All children are entitled to an organic program of education which shall include adequate facilities, not only for general, but for religious instruction and training.

3. Such a division of the child's time as will allow opportunity and strength for religious education should be reached by consultation between parents and public school authorities without formal agreement between the state and the churches as institutions.

4. The work of religious instruction and training should be done by such institutions as the home, the church, and the private school, and not by the public school nor in official connection with the public school.

5. The work of religious education must depend for dignity, interest, and stimulus upon the recognition of its worth, not merely by public school authorities, but by the people themselves as represented in the homes, the churches, private schools and colleges, and industries.

6. The success of a program of religious education depends—

(a) Upon the adoption of a schedule which shall include the systematic use of week days as well as Sundays for religious instruction and training.

(b) Upon more adequate provision for training in the experience of public and private worship, and for the use of worship as an educational force.

(c) Upon the degree to which the materials and methods employed express both sound educational theory and the ideals of the religious community in a systematic plan for instruction and training, which shall include *all* the educational work of the local church, whether such church works independently or in cooperation with other churches.

(d) Upon the degree to which professional standards and a comprehensive plan are made the basis of the preparation of teachers for work in religious education.

(e) Upon the degree to which parents awake to the unparalleled opportunity for the religious education of our children and youth, the profound need for sympathetic cooperation among all citizens of whatever faith, and the call for sacrifice in time and thought, in effort and money, consecrated to the children of the kingdom.

(f) Upon the degree to which the churches awake to their responsibility for the instruction and training of the world's children in the religious life, and take up with intelligence and devotion their common task.

PAN AMERICAN SCIENTIFIC CONGRESS.

GENERAL SESSIONS.

The second Pan American Scientific Congress was held in Washington, D. C., December 27, 1915-January 9, 1916. It marked the advent of a new epoch in the relations of the American republics—scientific, diplomatic, social, and educational. Among the 1,000 delegates were many notable scientists who considered not only subjects of scientific interest, but important problems of statecraft, such as arbitration and international unity between all the Americas.

Section IV was devoted exclusively to education. Dr. P. P. Claxton, U. S. Commissioner of Education, presided at the opening of the general session on education, on December 28. In his address he dwelt on the subject of education and democracy.

He maintained that the ideals of the United States and those of Latin America are similar, the political and educational trend of all the countries of the western world being toward democracy and general public instruction. The speaker stood for still closer relation between the United States and the Republics of Latin America, and advocated an educational congress of all the Americas, to meet at stated intervals in connection with the scientific congresses for the realization of the common aims of democracy and general education.

His excellency, Carlos María de Peña, minister from Uruguay to the United States, read a thoughtful paper on educational conditions in his native country. He stated that Uruguay, in formulating its educational system, had followed for the most part that of the United States. The minister's paper, which was in English, was well received.

Dr. José Ingenieros, professor of philosophy of the University of Buenos Aires, who spoke in Spanish, took for the subject of his paper, "A new organization of universities according to scientific philosophy." He emphasized the importance of scientific education and research work; for science, he asserted, had changed the views of humanity. The old classical education ("the humanities") no longer expresses completely the viewpoint of modern human life;

therefore it becomes necessary to formulate educational aims along more scientific lines.

A thoughtful paper by Dr. Charles Eliot, president emeritus of Harvard University, on "The changes needed in American secondary education," was read by Dr. S. P. Capen, of the Bureau of Education. Dr. Eliot urged the training of the senses as the most important part of education, because such training, in addition to forming the facility for accurate observation, creates the habit of careful reflection and measured reasoning. The writer maintained that little attention is paid in schools to the training of the senses, the secondary schools giving only from one-tenth to one-sixth of their energies to sense training. To correct this deficiency he urged the introduction of more hand, ear, and eye work, such as drawing, carpentry, turning, music, and cooking, and the dedication of more time to the sciences and to observation, to chemistry, physics, biology, and geography, geological, and ethnological, but not political.

In order to allow space for these additional subjects in the already crowded secondary-school programs, memory subjects should be somewhat curtailed, afternoon hours utilized, and the long summer vacation reduced.

Sections 4 and 9 (commerce, finance, and taxation) met in joint session to consider the subject of "Commercial education," under the presidency of Dr. Antonio Fontecha, commissioner from Honduras to the Panama-Pacific Exposition.

Hon. William C. Redfield, Secretary of Commerce, gave a résumé of the scientific activities of the United States Department of Commerce. "The modern conqueror of commerce," he said, "leaves no ruins in his path; he builds up wherever he goes; and in this respect he differs from the warlike conqueror of the past."

The paper deplored the lack of properly trained men in the United States fitted to represent the Government as commercial agents to foreign countries and asserted that the lack of a practical knowledge of languages on the part of those who present themselves for examination forms a serious stumbling block in their path of progress and success.

Hon. Andrew J. Peters, Assistant Secretary of the Treasury, made an appeal for technical education of business men, and in this he was supported by John H. Fahey, president of the United States Chamber of Commerce. Mr. Fahey dwelt on the remarkable work accomplished by the Boston School of Commerce and the consequent demand for its graduates on the part of business men. He also cited the work of the New York High School of Commerce and similar institutions in other places.

The scholarly paper by Dr. Edmund J. James, president of the State University of Illinois, on the "Development of business educa-

tion in the United States" was the feature of the session. He gave an interesting sketch of the history of commercial education in this country and related his experience as a professor in the Wharton School, Philadelphia. He said that the highest type of business education should be sought for in the universities, and he prophesied that commercial training as an integral part of the university curriculum would eventually surpass that of the commercial technical schools of Germany. The address was a presentation of the philosophy of commercial training.

Dr. Edwin F. Gray closed the afternoon with a paper on the difficulty of introducing technical subjects into the schools, which were forced to take up the burden of vocational education. He therefore made a strong plea for the introduction of business high schools throughout the country.

The second general session of Section IV was presided over by Dr. Ernesto Nelson, national inspector of higher education of Buenos Aires, Argentina.

The address by Dr. Nelson on "What should be the primary and what the secondary purpose of secondary education" created a profound impression. He dealt with fundamentals in pedagogy and attacked the entire system of organized education as consisting largely of memoriter work. He declared that the university is largely responsible for the ills of the present system.

Said the speaker:

In the school of to-day, and, to a certain extent, even in the primary school, knowledge getting is throwing into the shade all other activities more vitally concerned with the character-forming end of education. This is due to the fact that the university, being the educational institution which first gave education a tangible social value, has forced its own standards down through the whole educational system to such an extent that even to-day the amount of information supplied is the universally accepted test of the amount of knowledge given or received.¹

Dr. Nelson was followed by Prof. Dario E. Salas, of Chile, who discussed the subject of primary education and taxation for the same as applicable to conditions in Chile. Dr. K. G. Matheson, president of the Georgia School of Technology, Atlanta, Ga., was introduced to the assemblage. He dwelt briefly on the advantages to be derived from scholarships for enterprising Latin-American students in American technical schools and emphasized the good results that would flow therefrom, commercial as well as friendly social intercourse between North and South America.

Prof. Juan Monteverde, of Uruguay, read a paper on the "Purposes of secondary education in the American Republics," in which he

¹ Dr. Nelson's paper is printed in full in U. S. Bur. of Ed. Bulletin, 1916, No. 10.

emphasized the fact that the main purpose of secondary education should be to create in the people a consciousness of their social obligations. It should, secondly, prepare the mind for higher studies.

Prof. Monteverde was followed by Dr. T. Muhm, of Chile, who delivered an able address on medical education.

The *pièce de résistance* of the meeting was the able and scholarly address by Dr. Luis A. Baralt, professor of the Institute of Habana, Cuba, on "What remains to be done for education. Wanted: A thoroughgoing reform in Pan American education." Dr. Baralt's discourse was characterized by its highly idealistic tone. He said:

Much has been done for our education, but much also remains to be done. Radical reforms ought to be introduced in all the important parts of education—the end, the ideal, the spirit, the matter taught, the methods, and the extent of education.

He deplored the fact that much of the teaching lacks universal solidarity, spirituality, and consecration. It is largely selfish and utilitarian, while it ought to be social and altruistic. "Most teachers," he declared, "are deficient in the missionary spirit, which alone can produce the enthusiasm their sacred and sublime calling should awaken." He said a solution must be found for the great problem of spiritual or religious knowledge in the schools without any dogmatic or sectarian teaching.

Dr. Baralt was followed by Prof. John Driscoll Fitz-Gerald, of the University of Illinois, who set forth briefly the principal interests of university students in the United States, meaning thereby the "extra curricular" interests, such as journalism, music, drama, athletics, fraternity and sorority life, graduate clubs, foreign-language clubs, and religious work.

Dr. R. E. Durán, of Honduras, discussed the subject of the interchange of students and teachers; also the recognition of degrees and technical diplomas in the different American Republics.

He thought an agreement among all the American Republics would be the most efficacious method for organizing a systematic interchange of students and teachers in their universities as well as for obtaining a mutual recognition of the technical and professional degrees granted by high-grade institutions of the said Republics, the Pan American Union being commissioned with both purposes.

Dr. Augustus S. Downing, first assistant commissioner in higher education, Albany, N. Y., presented a plan for securing a mutual recognition of technical and professional degrees granted by institutions of the first rank in the several American Republics.

The last general session of Section IV was opened with an interesting paper on the Pan American Bibliographic Union, by Dr. Carlos S. Cruz, of Chile, which was read by Dr. Darío E. Salas. The

writer maintained that a bibliographic union would bring intellectual advantages similar to the political and commercial advantages of the Pan American Union at Washington, and he advocated the establishment by each national library of a central office for bibliographic information.

The address by Prof. Narciso Garay, director of the National Conservatory of Music and Declamation of the Republic of Panama, was a scholarly presentation of the influence of the State in promoting the study of music in the Americas. According to the writer the Spanish-American culture has been derived from European sources, and the result has been the centralization of government and the cultivation of the fine arts and their encouragement by the State. The ideals of North America, on the contrary, find their origin for the most part in the intense individualism of England, which left to the individual the pursuit of the arts.

Dr. José M. Gálvez, of the University of Chile, read a paper on "A scheme for modern education," in which he emphasized the growing bulk of human knowledge and the difficulty of acquiring more than a segment of it. He summarized his conclusions as follows: (1) Professional training should be highly specialized from the beginning; (2) secondary professional arts and sciences should be abridged; and (3) time spent in reading and writing should be shortened in every way possible.

Dr. Carlos M. Macedo, of Peru, presented a paper in Spanish on "Medical relations in the Americas."

Alvin S. Pope spoke on "Education at the Panama-Pacific Exposition" and John A. Brashear on the "Educational fund commission of Pittsburgh, Pa."

In an ably written paper on "Industrial education in Latin America" Harold E. Everley told about the growth of industrial education in Latin-American countries, emphasizing the desirability of extending this form of education in primary schools.

Among other desiderata suggested by Mr. Everley were the Government control of industrial schools and the establishment of a closer relationship between the schools and the industries.

Upon the suggestion of the chairman, Dr. José M. Gálvez, the topic of Mr. Everley's paper was made the subject of an interesting discussion. Dr. E. Nelson explained the status of industrial education in Argentina. Dr. Gálvez said that the general characteristics of Latin-American nations were responsible for the theoretical character of their education. Especially in regard to industrial schools, the still prevailing scorn of manual labor presents an important obstacle to the introduction of a more practical training. Dr. Milton Fairchild emphasized the idealistic attitude of South American educators, and expressed hopes that both North and South America

will be ripe soon for the introduction of moral education in their educational systems.

The question of language teaching was given considerable attention in this prolonged discussion. All speakers agreed upon the necessity of the obligatory teaching of Spanish in public schools of the United States and English in Latin America.

The discussion gradually became an informal round-table affair. Among other topics discussed was the question of popular feeling in Latin-American countries toward this country. Dr. Gálvez assured the United States delegates of a perfect feeling of friendship on the part of South American nations. The old distrust and misconceptions are rapidly melting away as the peaceful and friendly intentions of this country become more generally known among Latin-American peoples.

Resolutions were passed emphasizing the importance of promoting a knowledge of the achievements and influence of the founders of the independence of the American Republics among the peoples thereof, and suggesting that the principal details of the lives of the liberators and statesmen of the continent be included in courses of study in schools of the American Republics.

That there be established in the universities of the United States chairs of the history, development, and ideals of the Latin American peoples, and in the universities of Latin America chairs of the history, development, and ideals of the people of the United States.

That Spanish be taught more generally in the schools, colleges, and universities of the United States and that English be taught more generally in the educational institutions of the Latin American Republics, and that both languages be taught from the point of view of American life, literature, history, and social institutions.

That the study of sociology in American universities where it is not at present taught be inaugurated.

That the Governments of the American Republics be petitioned to further the interchange of educators of all grades and of students of university, normal, and technical training, and to encourage both to make visits of instruction to other American countries.

That there be published a series of volumes, entitled the "Pan American Library," with the object of popularizing, in the several languages spoken on the continent, the best scientific, literary, and artistic works of American authors.

Confirming the resolution adopted at the First Pan American Scientific Congress of 1908-9, the congress recommended the organization in connection with the Pan American Union of a department of education, which should—

(a) Be intrusted with the publication, in Spanish, Portuguese, French, and English, of such works on education as are of importance to the American countries;

(b) Keep the different Republics in touch with educational progress;

(c) Promote in each country the scientific study of educational problems from both national and American standpoints;

(d) Facilitate the interchange of ideas and information among the teachers of the continent, and in general, to serve the educational interests of the Americas.

SUBSECTIONS.

Subsections were held on agricultural education, education of women, elementary education, engineering education, university education, commercial education, medical education, etc.

An enthusiastic conference on "Training for foreign service" was held in connection with the section on commercial education.

Commissioner Claxton inspired the meeting with his faith in the possibilities of training for commercial service, both public and private.

John Barrett, director general of the Pan American Union, spoke eloquently of the opportunities for political and social relations between the American Republics.

Mr. W. J. Carr, director of the consular service, then presented a clear and frank statement of the duties and qualifications of the service. He made it clear that the demand for trained men is not extensive enough to warrant the establishment of a school for special training in the consular service, but pointed out the fact that training for foreign-trade service furnished a preparation quite adequate to meet the requirements for service abroad, either public or private.

This need for men trained for foreign trade was emphasized by the next speaker, Mr. James A. Farrell, chairman of the National Foreign Trade Council. In a concise manner he outlined the elements essential for effective training for this service.

These papers called forth many pertinent comments. An interesting side light was thrown upon the problem of language training, especially in English, by Dr. Edgar Ewing Brandon, of Miami University.

A joint session of the sections on university education and exchange of professors was characterized by an endeavor to base Pan American relations on the ground of common development of education and science.

The session was presided over by Dr. F. P. Keppel, of Columbia University.

Prof. John Bassett Moore presented a paper entitled "The organization and development of a plan for the systematic exchange of university students and university professors between the several American Republics." In this paper Prof. Moore emphasized the necessity of systematic organization of exchange of professors. The practical organization of this plan should be in the form of establishing in different universities chairs on history, institutions, civilization, and ideals of nations, represented by the respective foreign professors. Regarding the exchange of students, Prof. Moore offered a suggestion that youths should not be sent abroad at a very imma-

ture age, for it has been shown by actual experience that they become completely estranged from their home country.

Prof. Narcisco Garay read a paper, "On the road toward the Pan American University," proposing to establish an educational institution in Panama that would serve as an intellectual link to all American Republics.

Señorita Graciela Mandujano pictured the status of instruction in modern languages in Chile, the difficulties with which it was confronted at the beginning, and how these difficulties were overcome by application of modern methods. The people of Chile feel the necessity of learning English; the American people have no compelling need of learning Spanish. A mutual recognition of languages of their prospective allies on the part of all American Republics would constitute a powerful factor in making for a Pan American unity.

Dr. Clyde Furst, of the Carnegie Foundation for the Advancement of Teaching, presented a paper on the status of university professors in the United States. The closing statement of Dr. Furst's paper gave an eloquent summary of its contents: "There is no better status in the land than that of university professors."

Prof. L. S. Rowe's paper, "The desirability of affording reciprocal opportunities to teachers in secondary schools in the United States and the countries of Central and South America," struck the keynote of the whole session.

"The strengthening of ties binding this country and South America can not be accomplished by merely intensifying our commercial relations with them" was the statement of Prof. Rowe. It is by maintaining permanent contact in cultural development of all the countries concerned that the real understanding will be achieved. This cooperation must come through the efforts of the peoples as well as the Governments. The following measures were proposed by Prof. Rowe for this purpose:

(1) The appointment of groups of teachers of primary and secondary schools to become acquainted with conditions throughout the continent.

(2) Interchange of university students between the United States and Latin-American countries.

(3) Interchange of professors.

(4) Creation of opportunities for Latin-American technical students to receive training in great industrial establishments in this country.

One of the meetings of the subsection on university education was devoted to university-extension work in its various phases, but more particularly to the relation of the university to public service and the work of governmental administration. Dr. F. L. McVey, president of the University of North Dakota, emphasized the importance of trained men for the functions of government. He said:

The part the universities must play in this new movement for efficiency in public service is important and not altogether clear as to procedure. The State

authorities are not fully in sympathy with such a move. Consequently the university must build up a background of opinion through extension lectures and classroom instruction from which will proceed two results—(1) a constantly enlarging public opinion and (2) a growing group of young men looking for opportunities in the new field of professional government.

In the discussion of extramural services of State and endowed universities, etc., Dr. Edward K. Graham, president of the University of North Carolina, dwelt on the humanistic side of the question and Dr. John A. Fairlie, of the University of Illinois, on the governmental. The paper by Prof. Herman G. James, of the University of Texas, on the governmental phase of the theme, was read by Prof. Manning.

Dr. Fairlie made an historical résumé of extension work in the United States. He thought the formal organization of university extension was more highly developed in State universities, but endowed institutions were also active.

Dr. James emphasized the fact that it is natural and right that—

The State university should compensate the State's service by rendering expert decisions on problems that the latter is called on to solve and concerning which it must legislate.

High governmental posts, such as those of the 10 departments—State, Treasury, War, Navy, Post Office, Interior, Justice, Agriculture, Commerce, and Labor—are not filled by special competition in the frequently technical problems they have to solve; nevertheless the President frequently calls the incumbents of said posts to solve questions of government. This would be an opportunity to consult the opinion of university professors. We can, of course, make an exception of the Departments of War, Navy, and Post Office.

The Secretary of State, the President, and the Senators are also not incumbents by special competition in the affairs with which they must deal, and as said affairs are often of the very highest social or economic importance the university professors could be consulted as higher authorities.

Would it not be right to intrust matters of the importance of such as go to the Nation's Attorney General for judgment to a body of savants, such as university professors?

It is needless to add that the affairs of other departments would benefit if directed by more learned and broader judgment. Our university professors could lend such service to the Nation by dividing their year's work and devoting one-half to university work, the other to questions of government.

Still more important would be the services of our professors in the legislation of the several States.

They might also render excellent services as examiners of candidates for the numerous and varied technical positions in the administration. The necessary periodic amendment of the Constitution would also be better advised if intrusted to our professors.

The services of our professors would be extended even to cooperation in the improvement of municipal administration. Our universities could maintain a special department to deal with professional and technical matters in their respective communities, especially matters of valuation, others of engineering, hygiene, administration of properties, and city surveys and maps. Our universities could also organize an intermunicipal association to bring the respective officials together in conventions and by means of publications.

By establishing correspondence they could also contribute to the instruction of municipal employees; for example, the appraisers, a very necessary matter in our municipalities.

The discussion that followed the papers was animated. Dr. P. P. Claxton, United States Commissioner of Education, precipitated matters by asking if it were not inadvisable for the university, in its State relations, to have any police functions added thereto. It were better for the university to confine itself to preparing efficient men for the public service and acting in an advisory capacity to the State only. The general trend of the discussion was toward the disseveration of such relations between the State universities and the State, as outlined by Dr. Claxton; for example, making the university responsible for enforcing the law on food standards. The inspection of foods might well be undertaken in the laboratories of the universities, but the enforcing of the law on the subject should be left wholly to the proper police department of the State. And so with factory inspection, etc. Giving such executive powers to the universities, he maintained, precipitated partisan feeling and brought the institutions of higher education into politics.

CHAPTER XXIX.

EDUCATION IN THE TERRITORIES AND DEPENDENCIES.

ALASKA.

By WILLIAM HAMILTON, Alaska Division, Bureau of Education.

During the year the field force of the Bureau of Education in Alaska consisted of 4 superintendents, 1 assistant superintendent, 102 teachers, 6 physicians, and 7 nurses. Seventy schools were maintained, with an enrollment of about 3,600. Complete reports have not yet been received from the remote schools in the interior and in the Bering Sea and Arctic Ocean regions.

Conspicuous among the activities of the Bureau of Education in Alaska during the year has been the endeavor to aid the unique colony at Metlakahtla, on Annette Island.

In August, 1887, William Duncan, an independent missionary working among the Tsimpsian Indians of British Columbia, brought to the Annette Islands, in the southeastern part of Alaska, a colony of between 800 and 1,000 of these Indians from the old town of Metlakahtla, in British Columbia. By act of March 3, 1891 (26 Stat., 1101), Congress set apart Annette Islands for the use and occupancy of these Indians under such rules and regulations and subject to such restrictions as might be prescribed from time to time by the Secretary of the Interior.

Under the leadership of Mr. Duncan, this colony made rapid progress. The heads of families of the colony built good homes on lots set apart for them; a large church, a schoolhouse, and other public buildings were erected. A salmon cannery and a sawmill were established, first through the cooperation of Mr. Duncan, the Indians, and philanthropic persons in the United States; later, Mr. Duncan bought the interests of these persons and of the natives and operated the cannery and the sawmill as his personal property, employing native labor.

During recent years the cannery and sawmill have not been operated. Since these industries closed, the Indians have no means of making a living on the island and have had to go elsewhere for em-

ployment, and the colony was rapidly deteriorating. Three years ago the Government established in the village of Metlakahtla a school which it now maintains with five teachers. In order to give the Metlakahtlans an opportunity for self-support on the island, it was decided last winter to put the cannery and the sawmill again in operation. To this end the cannery building was leased for a term of five years, beginning April 1, 1916, to a cannery operator of Seattle, Wash., on terms which it was estimated would produce an annual income of \$7,500 for the village, give employment to a large percentage of the inhabitants, and enable the natives at the end of the period of the lease to purchase all of the lessee's interests and to operate the cannery themselves under the direction of the Federal Government.

On May 17, while necessary repairs on the building were being made by the lessee and while he was awaiting the arrival of new machinery, the cannery building was completely destroyed by fire, as were also the warehouse and a portion of the wharf. Because of this loss by fire the lease is rendered ineffective. The natives are again without any means of support on the island, nor is there any way of providing for such support until the cannery can be replaced and the sawmill repaired. There is also pressing need for the repair of the pipe line which brings water from a mountain lake to the village and without which there is no adequate supply of water either for drinking or for protection against fire.

In this emergency an earnest, but unsuccessful, effort was made to secure from Congress a reimbursable fund of \$25,000 for the encouragement of industries among the natives of Alaska, which would have been used first for the rebuilding of the cannery, the repairing of the sawmill and the pipe line at Metlakahtla, and for assisting the natives in the operation of these industries.

In addition to rendering possible the rehabilitation of the Metlakahtla colony, the granting of this reimbursable fund would enable the bureau to repeat in many parts of Alaska the success which has attended the industrial enterprises at Hydaburg in southeast Alaska.

In 1911 the natives of two villages in southeast Alaska migrated to a site selected on account of its advantages with regard to hunting and fishing, where they founded a village named Hydaburg. Under the supervision of the teacher of the United States public school, a cooperative company of the natives was organized to transact the mercantile business of the settlement and to operate a sawmill. The machinery for which was sent them by the Bureau of Education at a cost of \$2,200. The Hydaburg people have turned a dense forest into a thriving town with a busy wharf, a sawmill that turns out good lumber for them at a cost of \$10 a thousand, neat single-family

homes instead of the communal houses of their old villages, a long boarded street of which they are proud as the finest in Alaska, and a cooperative store which the first year made a clear profit of 125 per cent, paying a cash dividend of 50 per cent and adding 75 per cent to the capital stock. The cooperative company was started with a capital of about \$2,000, and within four years it has distributed \$12,727.53 in dividends. The Hydaburg people have been able to keep their money in the village, which is prosperous and independent. The cooperative company has repaid to the Government \$2,200, the cost of the machinery in the sawmill, which has been covered into the United States Treasury. Had this amount been expended from a reimbursable fund instead of from the annual appropriation, it could have been used by the bureau in creating industries in other villages.

In order to protect the natives from those traders who charge exorbitant prices for food and clothing and pay as little as possible for native products, the bureau fosters cooperative stores owned and managed by the natives, under the supervision of the teachers. The most successful of these stores is the one at Hydaburg; other stores are in operation at Klawock and Klukwan, in southeastern Alaska, on Atka Island, in the Aleutian Chain, and on St. Lawrence Island, in Bering Sea. These enterprises have been aided by the policy of securing by Executive order reservation for the exclusive use of the natives of tracts of land within which they are conducted.

Eskimos on the shores of Bering Sea and the Arctic Ocean have until within recent years had to dispose of their furs and other valuable commodities to the local trader. Now many packages of valuable furs, ivory, and whalebone are sent by parcels post to the Alaska Division of the Bureau of Education at Seattle, which sells the furs for the natives at auction to the highest bidder. The total of such sales since July 1, 1913, is \$25,070.51. With this money the Seattle office of the Alaska Division purchases at wholesale rates, in accordance with the requests of the natives, food supplies, clothing, lumber, and household goods, which are carried to their destination by the vessel making annual delivery of supplies to the settlements along the Arctic coast.

As the result of efforts continued during several years, Congress granted \$25,000 to provide for the medical relief of the natives of Alaska during the fiscal year 1915-16; in addition, \$18,733.98 of the appropriation for education of natives of Alaska was used for that purpose, making a total of \$43,733.98 for medical relief during the year. A hospital in which indigent natives receive free treatment was established in Juneau at a cost of \$14,215 for erection and equipment; six physicians and seven nurses were employed; the small

hospitals at Nulato, Kotzebue, and Kanakanak were continued; payments were made for the treatment of natives in hospitals and by physicians in several of the Alaskan towns upon the request of superintendents or teachers; and, as heretofore, all teachers were supplied with medicines for use in relieving minor ailments.

The reports from the reindeer stations for the fiscal year ended June 30, 1915, the latest complete information received, show a total of 70,243 reindeer, distributed among 76 herds. Of the 70,243 reindeer, 46,683, or 66 per cent, were owned by 1,140 natives; 3,408, or 5 per cent, were owned by the United States; 6,890, or 10 per cent, were owned by missions; and 13,262, or 19 per cent, were owned by Lapps. The total income of the natives from the reindeer industry during the fiscal year, exclusive of the meat and hides used by the natives themselves, was \$81,997. The total, 70,243, is a net increase of 21 per cent during the fiscal year, notwithstanding the fact that about 8,500 reindeer were killed for meat and skins during the year.

Within less than a generation the Eskimos throughout northern and western Alaska have been advanced through one entire stage of civilization, from making their living by the precarious method of hunting and fishing to the pastoral stage in which by their own industry they provide against want. However, there is still need for the extension of the industry on the Aleutian Islands, and especially in the delta country between the Yukon and Kuskokwim Rivers, where hundreds of natives are living in abject poverty, unreached by civilizing influences.

A recent feature of the reindeer enterprise is the holding of fairs or conventions, the object of which is, by the interchange of experiences and by competition, to increase the interest and efficiency of those engaged in the industry. Great enthusiasm was shown by the large delegations attending the four conventions which were held during the past winter. Activities in connection with the reindeer industry, such as lassoing, driving, herding, pasturing, and butchering were discussed. There were also races of various descriptions and target contests. Prizes were given for the best exhibits of harness, sleds, fur clothing, snow shoes, and other paraphernalia connected with the industry.

HAWAII.

By HENRY W. KINNEY, Superintendent of Public Instruction.

The variety of nationalities represented by the children in the public as well as the private schools of Hawaii is illustrated by the following statistics gathered during the term ending June 30, 1916:

Nationalities of pupils.

Nationalities.	Public.	Private.	Total.
Hawaiian.....	3, 222	603	3, 825
Part Hawaiian.....	3, 179	1, 405	4, 584
American.....	791	709	1, 500
British.....	106	44	150
German.....	166	98	264
Portuguese.....	4, 535	1, 181	5, 716
Japanese.....	12, 564	2, 156	14, 720
Chinese.....	2, 891	1, 034	3, 925
Porto Rican.....	911	53	964
Korean.....	327	185	512
Spanish.....	862	86	948
Russian.....	97	31	128
Filipino.....	444	55	499
Other foreigners.....	110	41	151
Total.....	30, 205	7, 741	37, 946

The public-school authorities, however, take no official cognizance of the racial differences mentioned; teachers and pupils of the various nationalities are treated on exactly the same plane. Any attempt to draw a color or national line would be fraught with widespread trouble to the department.

The increase in school population was, during the past year, 1,378. Special efforts have been made to secure as perfect a record for attendance as possible. The mild climate which prevails throughout the year gives Hawaii an opportunity in this respect, which the schools have managed to take advantage of, with the result that the figure of attendance for the public schools during the past year was 93.4 per cent.

The examination system which was instituted a few years ago is working out exceedingly well and has produced welcome results, not only by correcting much faulty grading and by compelling closer attention to the course of study than it was possible to exact formerly, but also by working constantly toward increasing the standard of efficiency. Thus, the examinations of eighth-grade pupils during the past three years show the following results:

Examinations of eighth-grade pupils.

Years.	Ex- amined.	Passed.	Per- centage passed.
1914.....	444	237	52
1915.....	498	347	70
1916.....	579	470	81

While the construction of schoolhouses is a function which has been placed in the control of the various counties, the department has been successful in securing the adoption of certain standard plans, covering particularly ventilation, lighting, and other features

of importance. Because of the climate, schoolhouse construction in Hawaii escapes largely the complications which make it a difficult problem elsewhere. Three or four types of plans, each adapted to the particular conditions, have been found sufficient. These have been adopted by the various communities, and much waste of time and expense in making plans and specifications has been eliminated. The cost of construction has also been materially reduced.

The number of teachers applying each year for positions in the Hawaiian Islands is out of all proportion to the number of vacancies existing there. The Honolulu Normal School has, in the past, sent out each year between 35 and 40 graduates. This number does not nearly meet the need of the department for new instructors. Efforts have therefore been made to increase the attendance in the normal school, in order that as many teachers as possible may be obtained in Hawaii. The department has found, generally speaking, that Hawaii-trained teachers do quite as satisfactory work as do those who have been trained elsewhere. Furthermore, they remain in the service longer than do those coming from the mainland, who often remain only one year, having then satisfied the motives of curiosity which inspired their seeking employment. The Hawaii-trained teacher also possesses the advantage of acquaintance with the various local conditions which a teacher should know in order to carry on work successfully. The efforts of the department appear to be sure of success, as the freshman class of the normal school last year was twice as large as it had been formerly, while the freshman class of the coming year will probably count over 100 members. In the meantime, the department has for years past secured a large proportion of its teachers from the mainland. During the past two years practically all of these have been secured from the State normal schools of California, largely because the proximity of California has made them more easily available than those from more distant places. The nationalities of the teachers in the public and private schools of Hawaii are as follows:

Nationalities of teachers.

Nationalities.	Public.	Private.	Total.
Hawaiian.....	78	9	87
Part Hawaiian.....	216	24	240
American.....	310	217	527
British.....	39	8	47
German.....	15	5	20
Portuguese.....	75	14	89
Japanese.....	17	24	41
Chinese.....	42	10	52
Spanish.....	2	.....	2
Other foreigners.....	10	13	23
Total.....	804	324	1,128

The four high schools located respectively on the Islands of Oahu, Maui, Kauai, and Hawaii, were during the past year placed on a basis of uniformity through the adoption of a uniform schedule of studies and points. The department is, however, planning to exercise a more complete control over these schools than has been the case in the past.

Industrial training and home economics continue to receive emphasis. School kitchens now exist in practically all the large schools, where cooking is taught the girls in the upper grades. The material prepared is disposed of by sale to the pupils, who are furnished with wholesome and satisfying luncheons at a cost of from 2½ cents to 5 cents, an additional 5 cents being added when desert is furnished. The results have been gratifying in the extreme. Not only have the girls of the various races learned the principles involved in the preparation of food, which were in the case of some of the nationalities, if not unknown, at least unobserved, but the children who eat the lunches are securing a very practical knowledge of food values, which, particularly in the case of these races which have a tendency toward suffering physical deterioration through improper nourishment, is of a very considerable importance. The sociological importance of equalizing the standard of living of the various races of the coming generation can not be overlooked.

Practically all the large schools have also been furnished with shops, in which training is given in carpentry and the allied arts. This is only prevocational in character, but as many of the pupils, particularly the Hawaiians, show considerable adaptability, some very gratifying results have already been obtained. Furniture has been built, schoolhouses repaired and, in a few instances, the pupils have built schoolhouses of the simple type of construction.

The work along agricultural lines has not been developed in as great a measure as is desirable. School gardens are maintained in most of the large schools in the country, but only in one district, namely, the windward side of the Island of Hawaii, have home gardens been carried on on a large scale. This feature of the work has, however, been found to be exceedingly successful where it has been tried, and, during the coming year, the department plans to extend its activities in this regard throughout all the islands of the group.

PHILIPPINE ISLANDS.

[From the Sixteenth Annual Report of the Director of Education, covering the calendar year 1915.]

GENERAL STATEMENT.

The substantial educational progress which has been reported for several years past has continued, and the work of the public schools

is proceeding systematically along the general lines determined upon during the past decade and a half.

One branch in which there has been rapid progress is the extension of public school work into the field of social economy. The year has witnessed the extension of public-welfare work, including the playground movement, social activities, care of children, health and sanitation, athletics, public amusements and entertainments, the improvement of home conditions through various lines of school industrial work, and the use of the schools as the social and civic centers of their communities.

For a number of years it had been felt by some that the academic branches were being somewhat neglected in favor of the newer and more striking undertakings in industrial and physical training. In a number of ways there has been opportunity in the past year to give a new impetus to academic instruction.

The rapid progress made during the past six years in school industrial work has brought this feature to its full development as a branch of public instruction, and brings the authorities face to face with a problem entirely new in public school affairs—that of taking up the industrial work at the point where it ceases to be simply instruction and becomes a commercial proposition.

With respect to school enrollment and attendance, the number of schools in operation during the year reached a total of 4,386. For the previous school year, 1914-15, they numbered 4,187; for 1913-14, 4,235; and for the preceding year 2,934. The total annual enrollment through December, 1915, reached 606,597; the annual enrollment for this fraction of a school year is greater than for any previous similar period. For the entire school year 1914-15 the figures were 610,519, and for 1913-14, 621,030. The average monthly enrollment for the present school year through December, 1915, was 526,095, as compared with 493,763 for 1914-15, and 489,070 for the preceding year. In average daily attendance, most important of all, the figure for the present school year through December, 1915, reached 473,213; for 1914-15 it was 441,742, and 428,552 for the preceding year. It is very significant that in average monthly enrollment and average daily attendance the proportion of increase during the past two years is greater than for the total annual enrollment; in consequence, the percentage of attendance increased from 88 for the school year 1913-14 to 89 for 1914-15, and at the present rate there will be further improvement in percentage of attendance for the present year.

In number of teachers actually on duty at the close of December, 1915, there were 488 Americans and 10,214 Filipinos. At the close of schools in March, 1915, these numbers were 538 Americans and

9,307 Filipinos, while for the preceding year the figures were, respectively, 612 and 8,850.

Considerable progress has been made during the year in the program for adequate school buildings and sites. At the close of December, 1915, for the 4,386 schools in operation, the number of permanent buildings reached 723 and the semipermanent and temporary buildings numbered 1,338. Of the permanent buildings, 344 were of standard bureau of education plan; at the same time there were 109 standard-plan permanent buildings under construction. It is estimated that in June, 1913, there were less than 600 buildings that would be classed as permanent and adequate structures, 180 of which were of standard bureau of education plan. By December, 1914, the permanent buildings numbered nearly 700, of which less than 300 were of standard plan. The number of adequate school sites—that is, sites which reach the standard of at least one-half a hectare for rural schools and one hectare for central schools—continues to be about one-third of the total number of sites belonging to the school authorities.

TEACHERS.

In the past 12 or 15 years Filipino teachers have taken over all the primary work and practically all the intermediate work; still more recently they have taken over the greater part of the supervising and industrial work, and they are now entering largely into the secondary teaching service. In this connection it must be recalled that the years of their tuition have been short, and that these young men and women are only now coming to the years of maturity and judgment which are essential to their success in this field. The latest step has been the placing of all the affairs of one school division entirely in their hands.

It was thought best that the change should be made in the division of Bataan, and Mr. Camilo Osias, the first Filipino division superintendent of schools to be appointed, took over the affairs of that division at the opening of the school year in June, 1915. Mr. Osias spent several years as a Government student in the United States, following a course in teaching and school administration. Upon his return to the islands he was for several years a supervising teacher in the Province of Union. Later he was assigned to Manila as academic supervisor. From this position he was promoted to the division superintendency of the division of Bataan. The success of the experiment in the Province of Bataan seems assured; the Filipinos have entered upon school work among their own people with enthusiasm and seriousness.

In line with this discussion it may be well to set down some figures as to the number of American teachers who have been

employed in the bureau of education during past years. The earliest period for which there is reliable record is the school year 1901-2, when 790 American teachers were on duty. This number continued about the same until the year 1908-9, when 825 teachers were employed. Since that time the number has been a constantly decreasing one, as follows: 732, 683, 664, 658, 612, 538; until in December, 1915, there were only 488 American teachers on duty. In the meantime the number of Filipino teachers has grown from 7,949 in 1908-9 to 10,214 in December, 1915. The total number of teachers has increased from 8,774 in 1908-9 to 10,702 at the close of this calendar year. During the earlier years of the administration American teachers were employed in all branches of the school work, assisted by Filipino teachers in the primary grades only. By the school year 1906-7 there were 82 Filipinos teaching in the intermediate grades and 34 teaching in the high schools. At that time began their assignment to supervising work, and a few years later, with the development of industrial work, as industrial teachers and supervisors. For the school year 1914-15 the figures were: Primary, 7,556 Filipinos, 14 Americans; intermediate, 833 Filipinos, 104 Americans; secondary, 17 Filipinos, 175 Americans; industrial, 726 Filipinos, 106 Americans; supervising, 175 Filipinos, 139 Americans. By December, 1915, there were teaching in the intermediate grades 92 Americans, as compared with 1,004 Filipinos; in the secondary work the number of Filipinos had increased to 61, as compared with 173 Americans; in the supervising work the number of Filipinos had come to exceed the number of Americans by 200 to 120; in industrial work the ratio had become 713 to 87.

The salaries paid to Filipino teachers have risen steadily, though not in proportion to the increase in attainments. They are still not so high as in other lines of work requiring no higher attainments and no more energy or ability. The number of teachers is so great, however, that any considerable increase in salaries would involve an expenditure of funds that is at present beyond the means of the government. Since 1910 the average salary paid to Filipino insular teachers has increased from ₱44.66 per month to ₱56.32, and that paid to municipal teachers from ₱18.29 to ₱22.05. The average salary paid to all Filipino teachers, insular and municipal, has increased from ₱21.56 to ₱26.35.

The total number of Filipino teachers on duty in December, 1915, was 10,214, of whom 1,270 were insular, 8,891 municipal, and 53 apprentice teachers serving without pay. Of these, 6,997 were male and 3,217 female. From an inauspicious beginning about 15 years ago, the Filipino teachers have been steadily developing into a corps of efficient and well-trained young men and women.

SCHOOLS AND ATTENDANCE.

The number of schools in operation during the present school year, as compared with the past two school years for the month of December of each year (a representative month). was as follows:

Schools.	1913	1914	1915
Primary.....	3,924	3,851	3,994
Intermediate.....	278	309	350
Secondary.....	44	41	42
Total.....	4,246	4,201	4,386

The attendance in these schools was:

Attendance.	1913-14	1914-15	1915 ¹
Annual enrollment.....	621,030	610,519	606,597
Average monthly enrollment.....	489,070	493,763	526,095
Average daily attendance.....	428,552	441,742	473,213

¹ June to December.

PORTO RICO.

By P. G. MILLER, Commissioner of Education for Porto Rico.

ENROLLMENT AND SCHOOL POPULATION.

Porto Rico has an estimated population of 1,200,000, of whom 419,282 are of legal school age, i. e., between 5 and 18 years, and 211,588 of compulsory school age, i. e., between 8 and 14 years. For 1915-16 the total enrollment in all public schools, excluding duplicates, was 151,562. Of these, 1,050 were enrolled in the University of Porto Rico and 526 in charitable and correctional schools. Of the 149,986 pupils enrolled in schools under the department, 84,399 were males and 65,587 females; 117,208 were white and 32,780 colored. The total enrollment was 35.8 per cent of the total population of school age and 70.9 per cent of the population of compulsory school age, but of the population of compulsory school age only 53.5 per cent were enrolled.

In addition to the pupils enrolled in the public schools, 5,832 children attended private schools, and more than 400 Porto Rican students attended schools in the United States. The average number belonging in all schools was 128,840, the average daily attendance 120,099, or 93.2 per cent. Of the 149,986 pupils enrolled, 2.1 per cent

were found in secondary schools, 40.4 per cent in elementary urban schools, and 57.5 per cent in rural schools. No night schools were maintained.

There were 2,468 teachers—964 men and 1,504 women. American teachers number 172; Porto Ricans, 2,296. Of the total number, 2,085 are white and 383 are colored.

Of elementary pupils, 59.2 per cent were promoted to the next higher grade as against 57.4 per cent the preceding year; but, of those who were not absent more than 22 days out of the 162 days in the school year, 72.3 per cent were promoted.

Eighth-grade diplomas were awarded to 2,028 pupils completing the elementary school course, and 182 high-school pupils received diplomas.

There were 14 new graded teachers added to the profession by means of departmental examinations, and 106 candidates received licenses based on normal diplomas and certificates.

The schools of Porto Rico were conducted in 1,506 different school buildings, representing 2,546 different classrooms. Of these buildings, 486 are public property and 1,020 are rented; 310 are situated in urban centers and 1,196 in rural barrios. The school buildings range all the way from the straw-covered shack in remote rural barrios to thoroughly modern concrete structures in the larger towns and cities. During the past year 59 new sites for school buildings have been acquired, 13 in urban centers and 46 in rural districts; 36 school buildings have been completed and 47 are in the course of construction.

The total assessed valuation of property is \$183,016,311, or \$152.51 per capita of population.

The expenditure for educational purposes is \$1,348,306 from insular appropriation and \$491,710 from school-board funds, making a total of \$1,840,016.

The total per capita expenditure per pupil is \$10.40 for elementary education and \$54.11 for secondary instruction. The per capita expenditure per inhabitant is \$1.53.

Special attention has been devoted to rural education, and emphasis has been placed on securing proficiency in the common elementary branches in all schools.

RURAL EDUCATION.

Of the 419,282 children of school age, 331,233 live in rural barrios. Of this number, but 86,152, or 26 per cent, were enrolled in rural schools at any time during the year, whereas of the 88,049 children of school age in urban centers, 63,834, or 72.5 per cent, were enrolled.

It is evident from these figures that the greatest educational need in Porto Rico is rural education.

For the purpose of arousing public interest and of extending the functions of the rural schools, the department inaugurated a rural campaign. The purposes of the campaign were: To reduce illiteracy; to arouse the interest of the rural population in rural education; to help the peasantry improve living conditions; to put these people in touch with the world beyond their huts, giving them the taste of the things that make life more pleasant; to make the rural school the social center of the barrio; to improve rural home and community sanitation.

The campaign developed in various ways: Evening classes for adults; parent organizations and meetings; rural conferences; reading and library facilities; instruction in gardening and rural industries; visits to home of parents. The most salient feature of the rural campaign was the gathering of parents for the purpose of hearing simple addresses and lectures relating to the rural school and community life. These meetings were usually held on Sundays, the only day in the week when the workingmen could gather together. Invitations were extended through the children to the parents by the teacher, who arranged for the meeting. The supervisor, accompanied generally by the president or another member of the school board, a physician, and other prominent citizens would present themselves at the appointed hour for the purpose of giving instruction by means of lectures. About 700 meetings of this character were conducted in rural barrios. To-day the peasant of Porto Rico has come to realize that the public school belongs to him as much as it does to the planter or merchant. The rural teacher has ceased to be a teacher of the school and has become a teacher of the community. The visits to homes of the illiterate peasantry have done much to stimulate the interest of the parents in schools, and the result is better attendance and greater cooperation with the teacher. The rural school is reaching out to the home and assuming a leadership in local affairs. It is improving home and communal living conditions without trespassing into the field of politics.

PROFESSIONAL READING COURSES FOR GRADED TEACHERS.

In order to help teachers in their efforts to improve professionally, the department prescribed a reading course and sent out carefully selected books, giving teachers some of the best and latest ideas available on education. This course was not obligatory, the department not making it a requirement for renewing certificates or securing positions.

Supervisors reported that all of the teachers with but few exceptions pursued the course willingly, cheerfully, and faithfully, and

welcomed the opportunity given them to grow professionally as well as to improve their use of the English language.

The work was conducted by the supervisors of schools or by competent teachers; the teachers met weekly and the chapters assigned were fully discussed. A special effort was made to apply theory to local conditions.

Of the total number of teachers in urban centers, 924 did the prescribed reading and 57 failed to do so for various reasons. There were 138 rural teachers who also took the reading course voluntarily, without the suggestion or requirement of the department.

Practically all high-school teachers in the service have read Parker's *Methods of Teaching in High Schools*, in addition to other works selected by themselves. All high-school teachers and principals were required to submit a written statement at the end of the year of their reading and other activities outside of the classroom.

TEACHERS' MEETINGS.

Teachers' meetings have been held in all districts. Many of these took place in rural schools and were given exclusively for the purpose of instructing rural teachers in rural-school work.

These meetings may be classified as follows: General meetings, for all teachers of the district; graded teachers' meetings; special meetings for rural teachers. The graded teachers' meetings were largely devoted to a discussion of the books assigned for the professional reading courses. Of general meetings for teachers, 167 were reported. Educational questions of life interest for all schools were discussed. The following subjects are illustrative of the practical nature of the topics taken up: Teaching children how to study; how to conduct a recitation; how to conduct parents' meetings; betterment of rural conditions; moral and civic training; educational tests; seat work; the teaching of Spanish in primary grades; story telling; manual work in rural schools; interest in community life; the supervised study plan.

PARENTS' MEETINGS.

Parent organizations are now regularly established in a number of districts, and parents' meetings have been held in every district. Parents have been thus attracted to the school and shown what the school is doing. Special days were set aside when parents were invited to visit schools, not only for the purpose of seeing regular work, but also to inspect school exhibits. These were not prepared for the special occasion, but consisted of regular daily work, in order to enable the parents to note and appreciate the progress of their children.

EDUCATIONAL TESTS AND MEASUREMENTS.

Education in Porto Rico presents many and varied problems, and a more interesting field for the trained investigator who will come with the research spirit can not be found. There are many weak points in the system, but the facts as brought out by careful investigations, tests, and measurements, would be helpful in attacking underlying causes and applying remedies.

The fact that there is a problem of teaching English well and Spanish well to the people of Porto Rico should not prevent making other investigations with the unfit and misfit. There is a need for a careful study of physical defects as related to school progress, for without doubt there are thousands of pupils in Porto Rico with defective eyesight and hearing, enlarged glands, defective breathing, adenoids, and defective teeth. The results of an investigation conducted during the year in San Germán by Drs. Ramírez and Rivera Porrata seem to be indicative of what might be found in other places. Out of 395 pupils examined, 90 per cent were found with defective teeth and 90 per cent had never visited a dentist.

There is room for the dentist, the physician, and the school nurse, and it is to be regretted that funds are not available to carry on these important adjuncts of school administration.

Tests given from the central office in both English and Spanish to measure reasoning ability, accuracy in the fundamental operations, spelling in both languages, and in translating the idiomatic expressions have revealed weaknesses in content and adaptation of the course of study, which will be remedied the coming year.

The Ayres scale for measuring ability in spelling was used as the basis for the English spelling tests, and an effort is being made to work out a similar scale in Spanish. The Ayres scale for measuring the handwriting of children has been used also with excellent results.

These tests have brought out the need for more efficient teaching of fundamentals; of emphasizing minimum essentials; of thorough teaching in the lower grades; closer grading to be based on oral examinations rather than written; textbooks adapted to the environment; and a rearrangement of the language requirements in the lower grades.

Experiments with the hour or supervised study plan were conducted in the upper grades of San Juan, Ponce, and Mayaguez. The results obtained justify a continuance of the plan, especially when teachers skilled in teaching pupils how to study can be secured.

PREVOCATIONAL AND INDUSTRIAL EDUCATION.

The excellent program of prevocational education laid down by the preceding commissioner of education for Porto Rico has been de-

veloped during the year, and the sentiment of the people seems to be strongly in favor of this feature of the school curriculum. There is a demand for other forms of prevocational education in the elementary and secondary schools, besides woodworking and cooking and sewing.

It is hoped that as soon as the funds will permit, a beginning can be made in establishing several trade schools, organized at first, perhaps, on the half-time plan. Porto Rico is an agricultural country; there are few large industrial manufacturing industries, but there is a demand for skilled labor; and unless industrial education is emphasized for the express purpose of training artisans skilled in various trades, serious labor troubles will probably ensue. Although trade schools established years ago failed, due no doubt to lack of favorable public sentiment, the time is probably now ripe when schools of this type can be placed on a successful basis. The initial attempt should probably be limited in scope after a careful analysis of local needs and abilities and subsequent growth should come from the inside. Conservative procedure, if public funds are to be properly administered and results obtained commensurate with expenses incurred, can not be too highly emphasized.

Although woodworking for boys and cooking and sewing for girls have been incorporated in the urban courses of study of 49 municipalities, no organized attempt has been made to include this phase of instruction in the rural schools. The need is recognized and in time it will come. The first consolidated rural school to offer prevocational work was organized this year in Barrio Hato Tejas of Bayamón.

RURAL INDUSTRIES.

There are several very excellent fiber plants growing wild in Porto Rico, and these have been utilized by a number of rural teachers for making rope, baskets, brooms, bridles, and hammocks. These articles find ready sale. Considerable interest has been aroused in some rural communities, especially in the districts of Yabucoa, Yauco, Utuado, and Río Piedras. Exhibitions of agricultural produce and handwork made by the pupils of the rural schools of Yauco and Río Piedras were very praiseworthy and indicate the possibilities of this field, especially under efficient guidance. These sporadic attempts to suggest industries even on a small scale for "barrios" will eventually bear fruit, especially if competent instructors can be secured. Lace making, drawn work, and embroidery, for which certain sections are noted, should be encouraged through the schools, so that progress and improvement in the arts can be secured.

The supervisor of home economics made arrangements with a large commercial house in the United States to ship underwear to be hand

embroidered. The experiment was tried in connection with the classes in home economics in eight towns, and the girls did very creditable work. The underwear was returned and the girls received compensation commensurate with the quality and complexity of the work done. This attempt to suggest and provide employment for the large numbers of unemployed women in Porto Rico has special interest.

SCHOOL LIBRARIES.

School libraries were maintained in 58 municipalities, with a total of 26,195 volumes in urban schools and 3,451 in rural schools. At present very few of these libraries can properly be called school libraries, as most of the books found in them are not at all adequate for the needs and interests of pupils. Relatively very few of these books were selected and purchased for library purposes.

In order that school libraries may serve in a more effective manner the purpose for which they were established, the department has undertaken the preparation of an official library list of English and Spanish books. The list has been carefully prepared by selecting books and periodicals that are of help to teachers and pupils in connection with their work.

This list will serve as the official guide to school boards in making future purchases of library books.

DOUBLE ENROLLMENT.

The greatest weakness in the organization at the present time is the system of double enrollment, whereby a teacher is placed in charge of a group of 40 pupils in the morning and another group in the afternoon. This system obtains in the first and second grades of the urban schools and in nearly all rural schools. It was introduced for the purpose of reducing illiteracy as fast as possible. Whereas in the United States this system is in vogue as a matter of economy in the school buildings and each group of children has its own teacher, in Porto Rico an attempt was made to secure like results with one teacher, and herein lies the fallacy. The percentage of pupils in the first grade of urban schools promoted to the second in 1914-15 was only 45.9 per cent and in rural schools 49 per cent. It is readily observed that in the system of double enrollment pupils require twice the length of time or more to complete the work of a given grade, leading to discouragement on part of both teacher and pupil rather than to economy in the expenditure of school funds. During 1914-15 the per capita cost of elementary education for instruction and maintenance was \$10; for buildings and sites, \$1.75; making a total of \$11.75. The education of a given child in the

lower grades where the system of double enrollment prevails costs this sum multiplied by the number of years spent in that grade.

SCHOOL BUILDINGS AND SITES.

Because of the continued increase in the cost of building materials on account of war conditions, the department did not consider it advisable to encourage the erection of school buildings on an extensive scale. On the other hand, in view of the great difficulty of securing adequate sites with proper titles, considerable attention has been devoted to this feature of educational work. It is hard to make people realize that a school site should be large enough to afford room for the children to play, and in the country for carrying on work in school gardening. A definite policy has been established not to approve sites of less than an acre for rural schools.

The greatest advancement in the matter of securing sites was made by the San Juan school board. Not only have they been favored through legislative enactment with three valuable sites, but they have also acquired by direct purchase three others for elementary schools. After 17 years of American occupation, the capital city at last has an appropriate site for erecting a high-school building. The San Juan school board purchased the Latimer property in Santurce, with an area of 12,580 square meters, at a cost of \$30,000.

An admirable example has been set by Dr. Santiago Veve, of Fajardo, who has offered to construct three completely equipped concrete buildings, containing two classrooms, kitchen, and library, one in Luquillo, one in Ceiba, and the other in Barrio Sardinera of Fajardo, at a total cost of \$25,000. So far as known Dr. Veve is the first Port Rican to make a gift of this nature to the cause of education. Fifteen sites have been donated by other persons.

It is a matter of regret that there are still 11 towns where no school buildings of any kind have been erected in urban centers.

SCHOOL BOARD ACTIVITIES.

From the time of their organization until June 30, 1904, the school boards had no organized system of keeping their accounts. Beginning with July 1, 1904, the present system of accounting was organized, the commissioner of education promulgating rules and regulations to govern the same. This system with a few modifications has remained in force since that time.

When the present system was introduced, very few school boards had money in the bank, \$8,831.93 being the total sum. The other school boards were in debt, the indebtedness totaling \$51,368.65 on

June 30, 1904. Four years later this debt was wiped out and the school boards had \$116,438.16 to their credit over and above all expenses. At the close of the present fiscal year the school boards had a total of \$260,069.21 to credit over and above expenses, notwithstanding the fact that large sums have been spent in the construction of school buildings and the purchase of modern equipment.

RULES AND REGULATIONS.

The commissioner has issued two new departmental regulations in accordance with powers conferred by law. The first refers to school strikes and provides that any pupil who participates in a school strike expels himself by his own act. This regulation became necessary because of the recurrence of school strikes in the past and was published after the six weeks' strike of the pupils of the Arecibo High School.

The second regulation deals with the nomination and approval of rural, graded, and principal teachers. Where school boards and the commissioner fail to come to an agreement as to the appointment of teachers after a reasonable length of time has elapsed and the time for opening schools approaches, the commissioner appoints teachers directly. This regulation was promulgated with the aim of insuring a longer tenure of position to all good teachers and to protect teachers against political influence in making nominations and against loss of position for failure to make money contributions to political committees.

SUMMARY OF STATISTICS FOR THE SCHOOL YEAR 1915-16.

Number of different pupils enrolled in schools under the department of education classified by color and sex:

White—

Male	66, 588
Female	50, 618
Total	<u>117, 206</u>

Colored—

Male	17, 811
Female	14, 969
Total	<u>32, 780</u>

White and colored—

Male	84, 399
Female	65, 587
Total	<u>149, 986</u>

Number of different pupils enrolled in each kind of school under the department:

High schools.....	1, 626
Continuation schools	1, 585
Total of secondary schools.....	3, 211
Elementary urban schools	60, 623
Rural schools.....	86, 152
Total in schools under the department of education.....	149, 986

Number enrolled in the University of Porto Rico:

College of liberal arts and high school.....	283
College of law	55
College of pharmacy.....	34
Normal department	251
College of agriculture and mechanic arts.....	217
Practice school	260

Total in the University of Porto Rico.....	1, 050
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Number enrolled in charitable and correctional schools.....	526
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Number enrolled in private schools.....	5, 832
---	--------

Total enrolled in all schools in Porto Rico.....	157, 394
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Number of Porto Ricans attending schools in the United States.....	408
--	-----

Total of Porto Ricans attending schools.....	157, 802
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Average number belonging in schools under the department of education:

High schools.....	1, 368
Continuation schools	1, 317

Total secondary schools	2, 685
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Elementary urban schools.....	53, 253
-------------------------------	---------

Rural schools.....	72, 902
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Total	128, 840
-------------	----------

Average daily attendance in schools under the department of education:

High schools.....	1, 309
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Continuation schools	1, 237
----------------------------	--------

Total secondary schools	2, 546
-------------------------------	--------

Elementary urban schools	50, 763
--------------------------------	---------

Rural schools.....	66, 790
--------------------	---------

Total	120, 099
-------------	----------

Length of school year in schools under the department of education, 34 weeks, or 162 days, exclusive of holidays.

Number of teachers (teaching positions) in schools under the department of education:

White—

Male.....	781
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Female.....	1, 304
-------------	--------

Total	2, 085
-------------	--------

Number of teachers (teaching positions) in schools under the department of education—Continued.

Colored—	
Male -----	183
Female -----	200
Total -----	383
White and colored—	
Male -----	964
Female -----	1,504
Total -----	2,468
Teachers in high schools -----	71
Teachers in continuation schools -----	63
Total secondary -----	134
Teachers in elementary urban schools -----	1,085
Teachers in rural schools -----	1,249
Total under department of education -----	2,468
Teachers in the University of Porto Rico -----	61
Teachers in charitable and correctional institutions -----	10
Teachers in private schools -----	222
Number of buildings in use for schools during the year -----	1,506
Owned by the people of Porto Rico -----	486
Rented -----	1,020
Estimated value of all insular school buildings -----	\$1,917,377
Rental value of all other buildings -----	100,332
Total expenditures for school purposes during the year ending June 30, 1916 -----	1,840,016
By school boards -----	491,710
By the insular government -----	1,348,306
Department of education -----	1,226,938
University of Porto Rico -----	121,368

REPORT OF THE PRESIDENT OF THE BOARD OF TRUSTEES OF THE UNIVERSITY
OF PORTO RICO, FISCAL YEAR 1915-16.

The work done in the departments at Río Piedras during the year 1915-16 has been reduced, due to the fact that the budget for this year is about \$23,000 less than it was for the year 1914-15. At the beginning of this year the faculty was reduced, for economic reasons, by six teachers. Later, another instructor was provided in the college of law, as well as an instructor in agriculture and an assistant in the practice school.

In order to avoid the overcrowding of the classes that took place last year, the enrollment was limited to the number that could be handled with success. There were 405 fewer students this year than last. The increased entrance requirements in the normal department and in the colleges of law and pharmacy account to a certain extent for this decrease.

In the college of liberal arts the work follows two different lines, that of preparing students for professional courses in the States, such as medicine and engineering, and that of preparing teachers for high and continuation schools. There is a small group of students here who are doing special work for this purpose, and who have had practice teaching in the university high school. This is a feature that can and should be developed. This year there were no first-year high-school classes.

The college of law graduated its first class this year. The work done is very satisfactory, though there is need of another instructor, more room, and a good reference library. The college of pharmacy graduated its first class last year, and though several of the members failed to pass the first examination given by the insular board of pharmacy, all who took the examination the second time passed. The need of another instructor is imperative, and at least one more laboratory should be provided and equipped.

In the normal department a smaller class was graduated this year than last because of the raised entrance requirements and new requirements for graduation, compelling high-school graduates to stay two years instead of one for their diplomas. The course of study has been revised. Students carried too much work, and much of it was too formal and not sufficiently related to their future work as teachers.

A special course for the preparation of rural teachers has been adopted and will become effective next year. Special features of this course are work in agriculture, manual training or home economics, elementary science, rural-school management, rural-school methods, and rural hygiene and sanitation.

COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

The year 1915-16 has been for the college of agriculture and mechanic arts of Mayaguez one of steady progress, in spite of the fact that the amount of money available, the lowest in the history of the school, has rendered the strictest economy necessary. The enrollment, 217, has been about the same as the year before. A new building and a dairy laboratory have been completed during the year. The standard of work has been raised and the general attitude toward thorough study has been very satisfactory. The system of scholarships has been done away with. The proceeds of the dairy and of the college farm were made available by the trustees for student labor; 125 students, about 60 per cent, took advantage of this means to pay needed expenses.

A notable feature of the course as revised provides for a diploma in agricultural or polytechnic science to a student who has completed the first four years of study. A student who has received this diploma can finish the rest of the course in three years, while graduates of high schools, because of the lack of technical work, will need the usual four years. This subcollegiate diploma provides for pedagogical instruction, thus preparing the students for teaching in rural schools. The college can accommodate some 300 students with its organization for the coming year.

Following is a statement of the total enrollment:

College of liberal arts.....	24
Normal department.....	251
College of law.....	55
College of pharmacy.....	34
College of agriculture.....	217
High school.....	209
Practice school.....	260

Following is the number of certificates, diplomas, and degrees granted:

Diploma in agricultural science.....	3
Diploma in polytechnic science.....	12
Normal school diplomas.....	19
High school diplomas.....	53
Elementary normal certificates.....	87
College of law (degrees).....	18
College of pharmacy (degrees).....	12
College of liberal arts.....	0
Honorary degrees.....	2

THE CANAL ZONE.

By A. R. LANG, Superintendent of Schools.

ITEMS OF PROGRESS.

A full four-year commercial course was provided in the high school effective October 1, 1915. The subjects taught are bookkeeping, business law, commercial geography, commercial history, spelling, writing, commercial correspondence, business arithmetic, typewriting, and the Gregg system of shorthand. There were 45 pupils enrolled in one or another commercial subject.

To obviate the necessity of providing additional rooms at the Gatun colored school, the "double session" plan was adopted, by which one

room serves for two teachers with their respective pupils. Under this plan one section attended school from 7.30 to 10 a. m. and from 12.30 to 2.30 p. m., and the other from 10 to 12.30 p. m. and from 2.30 to 5 p. m. This plan was also put into effect in the colored schools at Paraiso, Empire, and Cristobal when conditions at these schools became such that it was not possible to provide room for all the pupils at the same time. It has proved quite satisfactory, resulting in considerable saving in new buildings, equipment, and janitor service.

Monthly inspections of schools, both white and colored, were made by the district physicians. The usual physical examination of pupils in the white grade schools was made during the week beginning October 18, 1915. The results of these examinations are shown herewith.

Annual Physical Examination of White Grade School Children During October, 1915.

Number of physical examinations made.....	1,002
Number found needing treatment.....	676
Number with other defects than those of teeth only.....	410
Number with defects of teeth as only defects.....	266
Percentage of those examined needing treatment.....	67
Defects found.....	933
Defective vision.....	97
Defective hearing.....	22
Defective nasal breathing.....	58
Hypertrophied tonsils.....	240
Pulmonary disease.....	32
Cardiac disease.....	20
Chorea or other nervous disorders.....	5
Orthopedic defects.....	13
Malnutrition.....	14
Defective teeth.....	430
Contagious diseases.....	2
Number of cases treated.....	261

A revised course of study for the elementary schools was printed and ready for distribution to the teachers on October 1. Spanish in the white grade schools was extended to include the third grades. The high-school course of study is now being revised and will be printed before the opening of school in October.

The following table summarizes the statistics for the year:

Comparative statistics for the years ended June 30, 1913, 1914, 1915, and 1916.

	1913	1914	1915	1916
Number of school buildings.....	29	23	15	16
Number of employees in division.....	86	75	65	60
Number of supervisory force.....	3	3	1	1
Total expenditures (approximate).....	\$90,000	\$89,000	¹ \$109,000	\$70,189
Estimated value of school property.....	\$150,000	\$130,000	\$120,000	\$110,000
Net enrollment:				
White schools.....	1,369	1,270	1,146	1,366
Colored schools.....	1,580	1,492	1,430	783
White and colored.....	2,949	2,762	2,576	2,149
Per capita expense of maintenance, approximate (based on net enrollment).....	\$35.19	\$32.22	¹ \$42.31	\$32.66
Total days of attendance.....	324,282	277,016	283,988	258,244
White schools.....	177,615	160,017	157,537	183,206
Colored schools.....	146,667	116,999	126,451	75,038
Average daily attendance.....	1,828	1,683	1,762	1,501
White schools.....	1,029	968	1,006	1,065
Colored schools.....	799	715	756	436
Average monthly wages of teachers:				
White.....	\$98.08	\$98.37	\$98.78	\$98.84
Colored.....	\$55.80	\$56.96	\$59.75	\$60.56

¹ Increase in expenditures due to erection of school buildings at Balboa, La Boca, and Gatun.

CHAPTER XXX.

CANADA.

By ANNA TOLMAN SMITH,

*Specialist in Foreign Educational Systems, Bureau of Education.*¹

ADMINISTRATIVE FEATURES.

The development of public education in the Canadian Provinces follows in the main the same course as in the United States, but the Canadian systems present a much more compact organization than those of the United States, with a stronger tendency to centralized control. This feature is particularly marked in Ontario. The minister of public instruction in this Province is not only the executive head of the system, but as a member of the legislature he initiates and largely directs school legislation, while his judiciary functions and powers of appointment give great weight to the measures he advocates. No other Province has reposed equal authority in the chief officer of education, but all have sought to secure uniformity of school provision and educational standards through Government action.

In Quebec the schools are either Roman Catholic or Protestant, and are controlled by two separate committees, one composed of Roman Catholic members and the other of Protestant members. The former deals with all school questions in the Province affecting the schools of the same faith and the latter with questions affecting Protestant schools. The two committees form the council of public instruction and in their joint capacity decide questions of common interest. The superintendent of public instruction, appointed by the lieutenant governor, is president of this council.

In Ontario, Alberta, and Saskatchewan provision is made for separate schools for Protestants and for Catholics, and the supporters of these separate schools are exempted from the payment of local taxes for the support of the public schools. The separate schools are under

¹ As in previous years, the chapters in this report dealing with education in foreign countries have been prepared under the general direction of the specialist in foreign educational systems from official reports and correspondence, and with the assistance of various collaborators. Special articles in the section are attributed to their respective authors.

Government inspection and follow the same general regulations as the public schools. In all other Provinces the schools are non-sectarian. The public elementary schools are free, excepting in Quebec, where fees are charged, which must not, however, exceed 50 cents a month nor be less than 5 cents a month. In the model schools and academies of this Province, which correspond to the grammar and high schools of our own States, the fees may be higher. In the high schools of Ontario fees are also charged. With these exceptions, the public schools of the several Provinces are free, their support being derived from provincial grants, local (municipal) appropriations, and school taxes.

Distribution of pupils in public, elementary, and high schools, 1914-15.

Provinces.	Elementary schools.	High schools.
Ontario.....	493,838	36,466
Quebec.....	428,245	15,660
Nova Scotia.....	98,291	9,477
New Brunswick.....	69,983	2,030
Manitoba.....	96,578	4,385
British Columbia.....	64,264	3,912
Prince Edward Island.....		
Alberta.....	89,806	94
Saskatchewan.....	107,957	5,028

¹ Includes 7,216 pupils pursuing secondary studies in the academies and 8,444 pupils in Roman Catholic classical colleges.

The system of public instruction in Ontario includes, besides the elementary and high schools tabulated above, public kindergartens which enrolled 25,554 pupils in 1914 and employed 396 teachers; continuation schools with 6,069 pupils and 237 teachers; and night schools classified as public and high, the former having 2,155 pupils with 67 teachers, and the latter 2,374 pupils with 84 teachers.

THE TRAINING OF TEACHERS.

In all the Canadian Provinces provision is made for the training of teachers, and the extension of this provision and the adaptation of the training to local needs are recognized as of first importance to the efficiency and completeness of the systems of elementary education. In the eastern Provinces the normal schools are well organized, and new conditions are met by their extension or modification. In the newer Provinces of the west liberal appropriations are made for normal schools, and their establishment and organization are among the chief concerns of the education authorities; temporary provision is also made for training teachers for the service of the rapidly increasing rural schools. The newer Provinces necessarily depend upon outside supplies for the full complement of teachers, and the com-

plaint is made by the eastern Provinces of the loss of many competent teachers who are drawn to the west by the large salaries offered.

On account of the different stages of advancement in respect to organization, the term normal school is applied somewhat differently in the different Provinces, signifying in some cases a highly organized institution, in others local schools or classes of temporary character. For convenience of reference, however, the schools thus recognized in the different Provinces are brought together in the following tabulation:

Statistics of normal schools, 1914-15.

Provinces.	Schools.	Number of students.		
		Men.	Women.	Total.
Ontario.....	7	209	1,480	1,689
Quebec.....	14	185	1,081	1,266
Nova Scotia.....	1	28	327	355
New Brunswick.....	1	52	304	356
Manitoba.....	120	111	.....	2 872
British Columbia.....	2	.....	.....	309
Prince Edward Island.....	3 1	111	198	309
Alberta.....	1	68	195	263
Saskatchewan.....	2	.....	.....	4 649

¹ Provincial, 6; local, 14.

² Of these, 466 were entered for short sessions.

³ Prince of Wales College and Normal School.

⁴ Includes students trained in short sessions at different points.

In addition to the normal school for Nova Scotia included in the table, the Rural Service School, which holds a session each summer, was attended by 144 teachers in 1915.

The Prince of Wales College and normal school of Prince Edward Island comprises, besides the normal department and academic course, an agricultural department. Presumably, however, the larger proportion of the students intend to engage in teaching in the schools of the island. The college received \$4,000 from the fund appropriated to the island from the Federal grant in aid of agriculture. The total amount of the island's share was \$26,529, and in addition to the sum appropriated directly to the college, a large part of the remainder was applied to work carried on under the auspices of the college. For the promotion of nature study in the schools, including office work, \$6,529 was allowed from the fund. The summer school of science, which held its third session in 1915, reported an enrollment of 357 teachers.

EXPENDITURES.

The expenditures for public schools in Canada are tabulated in the comparative table presented in the statistical survey of education in foreign countries, chapter 37. The total expenditures for public education in several of the Canadian Provinces exceeds the amount there given, as it includes expenditures for higher schools and

auxiliary agencies not comprised in the table. For the comprehensive system of public instruction in Ontario, the total expenditure in 1914-15 was \$18,590,000, an excess of \$3,500,000 above the amount required for the ordinary schools. In Nova Scotia the total expenditure, amounting to \$1,642,113, included \$49,087 for aid to local technical schools. The total expenditure for New Brunswick included \$20,000 for the university and \$12,677 for schools for the defective classes. The total expenditures for Quebec, amounting to \$7,992,542, includes \$100,000 for superior education. For the remaining Provinces, the total expenditure agrees with that given in the comparative table and the explanatory notes.

CURRENT MOVEMENTS.

The latest official reports issued by the provincial departments of education cover either the calendar year 1915 or the scholastic year ending June 30, 1915. In every case they show some effect of the war upon the schools, although up to the close of the period indicated this effect was felt chiefly in the universities and higher secondary schools. At the same time many teachers had left positions in the elementary schools to enlist in the service. Almost without exception the reports indicate a high degree of popular interest in public schools, increased attendance as regards both number and regularity, and larger proportions of teachers holding high-grade certificates. Although the Provinces differ from each other in their industrial demands and economic conditions, they are dealing with certain common problems in education.

RURAL SCHOOLS.

The great problem in all the Provinces is that of raising the level of the rural schools, which provide for more than half the school population of the entire country. The measures employed for the uplift of these schools are similar to those that have been engaging attention in the United States for the last decade. They pertain chiefly to the improvement of school buildings, the means of securing qualified teachers, of prolonging the period of school attendance, and of relating the work of the schools to the immediate environment and living interests of the children. These are the essential problems of city schools also, but they are much more easily dealt with in concentrated populations.

Ontario has been very successful in securing teachers for rural schools who have been trained for the work. More than 50 per cent of rural school teachers in 1914 held teachers' certificates of the second grade, which can be secured only by those who have attended a normal school and passed the examination at the close of the

session. In addition to this test, a favorable report from the principal of the normal school is required. Above 20 per cent of the rural teachers had third-class certificates, which are valid for three years only, during which time the holder very frequently prepares for the higher certificate.

The increase of salaries in rural schools has also had an excellent effect. In 1908 men teachers in rural schools received \$462 a year and women \$382. In 1913 the salaries were, respectively, \$591 and \$524.

As a result of the recent interest in rural uplift, the school grounds and buildings throughout the Province have been greatly improved. The majority of rural inspectors report the teaching of agriculture through the medium of school gardens or home gardens, which are rapidly multiplying by reason of the liberal grant made through the department of agriculture, in which grant all Provinces share on the same terms.¹

In Quebec, educational campaigns have been in progress very similar in character to those conducted in the southern section of the United States. The committee in charge of the Protestant schools reports 33 such meetings during 1914, and a special grant accorded by the Government for rural Protestant schools, which are generally in the poorest districts. The same year congresses of Catholic school commissioners were held in 19 sections of the Province, and great interest was shown in the promotion of subjects related to rural industries. It has been comparatively easy to secure teachers in the rural Catholic schools, on account of the numerous orders of the church devoted to teaching. The Christian Brothers are particularly successful in promoting the practical teaching of farming. As regards school gardens, it was reported in 1915 that this form of instruction in horticulture was given at 284 schools in 54 counties of the Province.

The superintendent of education for New Brunswick reports an increase in the number of consolidated schools, and suggests that since the board of education gives special grants to these schools, it should have the right to approve the nomination of teachers by the local school boards, since with an inferior teacher a consolidated school is less successful than the small district school. Parent-teacher associations have been formed in this Province, which work with good effect for the improvement of the rural schools.

In Nova Scotia the uplift of rural schools rests upon the director of rural science, who works directly with the teachers and the schools and excites the cooperation of churches and citizens in his endeavors. In February, 1915, the publication of a rural science bulletin was begun and copies were mailed to all teachers of rural science who

¹ For details of this grant see Rep. of Commis. of Educ., 1915, vol. 1, p. 643.

expressed any interest in the work. In addition, the *Agricultural Gazette*, published at Ottawa, and a number of other Government reports and bulletins are distributed to all the teachers of the Province. The summer school is held under the joint direction of the normal schools and agricultural colleges, and between 150 and 200 teachers are in attendance every summer. In the session of 1915, diplomas showing the completion of the full course were awarded to 34 teachers, and 80 certificates indicating preparation for teaching science studies. The director reports that during the school year 1915, the number of home gardens cared for by school children was 2,000, which was nearly three times the number reported in 1914.

The chief superintendent of education for Prince Edward Island states that great progress has recently been made in the study of rural science and agriculture. In order to foster this interest the department of agriculture inaugurated a two weeks' summer course for teachers at the Prince of Wales College in 1913. In 1915 this school was attended by 357 teachers.

The superintendent calls attention to the fact that nearly one-third of the schools have each less than 15 pupils, and urges that an endeavor be made to reduce the number of small schools by consolidation. It is hoped that the interest excited in agriculture and in rural science through the united efforts of the department of agriculture and the department of education will induce districts to combine for the purpose of having larger and more efficient schools.

In British Columbia the director of elementary agricultural education has conducted a vigorous campaign in the interests of his specialty, in which effort he has been ably seconded by the minister of agriculture and his aids. The work in the schools is developed on a basis of nature study. In connection with this subject, use is made of the school garden, which serves at once to excite the bodily activity and the mental alertness of the child. The interest of teachers is sustained by the special courses offered in the summer school of rural science, which draws a large part of its teaching force from the University of British Columbia. In the session of 1914 a systematic course in rural science was carried out, and it was proposed to continue the instruction on the same lines in 1915.

The provincial government offers special grants for the improvement of school grounds and agricultural instruction conditioned upon the expenditure of equal amounts by the local school boards.

In Manitoba 400 school gardens were reported in 1915, and in connection with the general work of rural education 63 boys' and girls' clubs were formed, with a membership of over 5,500. These clubs are conducted under the general supervision of the Manitoba Agricultural College, which excites competition by the offer of prizes.

The awards are made at public gatherings and by this means the interests of parents as well as those of children are stimulated.¹

In Alberta and Saskatchewan peculiar problems of rural education arise from the constant stream of immigrants, comprising many nationalities, for whom the first essentials of public education, namely, schoolhouses and teachers, must be supplied. While the education authorities advocate the most advanced methods for rural schools, their adoption is necessarily slow in the new settlements, where it is difficult to excite the community spirit.

Recent legislation in Alberta obliges every school district to maintain its school in active operation during the whole session unless authorized to close it by the minister of education. This requirement, combined with more rigid enforcement of the compulsory school attendance law, has resulted in a marked increase in the attendance at rural schools and greater interest in their work. With this advance the disposition to establish consolidated schools has increased, and several communities have combined for this purpose during the past two years.

The staff of the education department includes a supervisor of schools among foreigners, who must use great judgment in his recommendations as to methods of administering the affairs of school districts in non-English settlements. Under "the paternal method" an official trustee is appointed by the department, with or without the consent of the ratepayers, and is given the full powers of a school board. Wherever possible, however, the ratepayers of the district are allowed to elect their school boards in the usual way. If the elected board fails to meet the requirements of the school law, the department interferes and appoints an official trustee, usually the supervisor, who is thoroughly familiar with the conditions. By this means the rural schools in the foreign districts are maintained throughout the school year under competent teachers. In his latest report the supervisor notes the progress in the establishment of school libraries and the very prevalent use of the English language in all the foreign settlements.

The official inspectors in all sections of the Province note increased interest in the teaching of agriculture and in the improvement of grounds and buildings.

In Saskatchewan the policy of consolidated schools for rural districts is strongly supported by the education authorities. In 1914 nine consolidated districts were organized and other districts were planning to unite in the same manner.

In the Weyburn circuit the Government inspector has excited much interest in school gardens and has succeeded in maintaining a community farm in connection with the school garden in one dis-

¹ See also chapter on School and Home Gardening, p. 259.

trict. He purposes to form a community center club in every district under his direction, and during the present year organized three such centers and six rural education associations. In the latter, parents combined with teachers to excite public sentiment for the improvement of their school buildings and the lengthening of the school terms. With respect to the centers already organized, the inspector states that school exhibitions were arranged to be held in each and a program of subsequent exercises as follows: A day for games, athletics, and physical training for October; concert in December; seed and stock show planned for February; oratorio to be presented at Easter; a festival of literature and music for June.

The plan adopted by the Saskatchewan government for the immediate disposition of the Dominion subsidy for agricultural education provides for a broad policy in respect to all the special interests of rural education.¹ It was decided that the portion of this subsidy payable to Saskatchewan should be assigned for expenditure to the department of education until the agricultural college, the department of education, and the department of agriculture should each receive one-third of the total grant. In accordance with this decision the department of education secures an annual sum, amounting in 1914 to \$6,500, to be expended in agricultural education directly under its auspices. The scheme of work outlined for 1915 on the basis of this appropriation comprised—

the appointment of directors of school agriculture, the appointment of a director of household science, the formulating of a policy respecting school affairs, teacher training in agriculture at normal schools, extension work by directors at teachers' institutes, conventions and public meetings of rate-payers, publication of bulletins, and short courses in agriculture and domestic science at the university and the normal schools. The organization of the work in household science, particularly in the rural districts, was determined upon and the department took measures to obtain the services of a director of household science.

It was also decided to appoint a director of school agriculture, but pending the choice of an incumbent for the position a short course in agriculture was given for teachers at the University of Saskatchewan in the summer of 1914. This course proved so successful, and the enthusiasm of the teachers was so great, that the department decided to arrange for two distinct courses in 1915, one for elementary teachers and the other for inspectors of schools and science teachers in the high schools.

CITY ACTIVITIES.

The cities of Canada are noted for the excellence of their schools and for their rapid adaptation to modern demands. Naturally the

¹ See also chapter on Agricultural Education, p. 251.

cities of the older Provinces have been in a better condition to meet new requirements than those of the newer western Provinces. The phenomenal growth of the cities in the latter has necessitated great effort to supply the buildings and equipments and to secure competent teachers. At the same time they have been unhampered by settled traditions, while the requirements of new settlements have emphasized the importance of such subjects as manual training, hygiene, domestic science, etc., for which it is difficult to find place in the fixed and overcrowded programs of long-established schools.

As a result of the MacDonald fund, experiments in the introduction of manual training in the city schools have now been in progress for about 15 years, and the current reports abound with interesting accounts of the success of this feature. It forms the elementary stage in a system of vocational training the need of which is recognized throughout the Dominion. In view of the large results already achieved by the appropriation for the promotion of agriculture, a general demand has arisen for a similar appropriation in the interests of vocational education, and while the efforts in this direction have been interrupted by the more pressing demands of the war, this event itself is furnishing new motives for renewing the demand upon the public treasury at the earliest possible moment.

The most interesting event of the past year pertaining to this general movement was the opening of the new Central Technical School building at Toronto. This ceremony took place on August 31, the lieutenant governor of the Province presiding. The building occupies two city squares, about one-fourth of which is devoted to lawns and garden plats. Including ground and equipment, the city of Toronto has invested about \$2,000,000 in this structure, which is said to be the finest of its kind in America. The courses of study for day pupils began on September 2, and those for evening pupils on October 1. They provide scientific, artistic, and practical training in a wide range of industrial and commercial subjects for persons engaged during the day, and equip students for important positions in many technical callings. Special provision has been made for women students who seek to fit themselves for feminine industries, including costume designers, housekeepers, embroidery and lace makers, etc. This institution completes a series of graded schools which provide for every degree of technical education leading up to the engineering department of the University of Toronto.

BILINGUAL QUESTION.

The agitation over the bilingual question, to which attention was called in the previous report, increased in intensity during the present year. Although the question affects the courts and public admin-

istration in various ways, its relation to the schools is paramount. In the older Provinces of Ontario and Quebec it is purely a question between the French and the English languages, but in the Provinces farther west it involves many racial distinctions, and becomes practically a polylingual question.

In Ontario a peculiar difficulty arises in this matter from the stand taken by the population of Irish origin. Although the majority of the Irish belong to the Roman Catholic Church, they do not want the French language to be given prominence in the separate schools maintained for children of that faith. On the other hand, the French population insists upon this course not only because French was the pioneer tongue of Canada and is dear to them from its association with their motherland, but also because of its influence in keeping up the sacred teachings of their own faith. From this difference of opinion between the Irish and the French minorities, both equally interested in the maintenance of the separate schools for Roman Catholics, the Government of Ontario has had great difficulty in the way of any endeavor to adjust or improve or alter the teaching of the two languages, English and French, in the separate schools.

From a careful analysis of the population of the different Provinces as given in the census of 1911 the following conclusions have been reached:

(1) That the margin of difference as to nominal education amongst the Provinces at that time was small. The percentage of the population able to read and write ranged from 85.10 in New Brunswick to 93.17 in Ontario.

(2) That in Ontario and Quebec the minorities were about the same in number though opposite in race and creed.

(3) That assuming half the Irish population to be Roman Catholics, and the proportion was probably much greater, their view of bilingualism would be an important one politically.

(4) That Canadians were a well-educated people so far as this test of reading and writing constituted education, and that race or religion did not affect the net result.

The difficulty in Ontario turns upon the Government's policy as detailed in the regulations issued in 1912 for the purpose of improving and insuring the use and efficient teaching of the English language in the public and separate schools of the Province.

The dissatisfaction of the French with the regulations led to a bitter attack upon the Government, and as a consequence various minorities in the Provinces farther west began to agitate for larger recognition of their respective languages. These claims threatened such disaster to the unity of the school work that a strong support developed in favor of the action of the Ontario Government, and thus the bilingual difficulty became the outstanding educational problem

of the year. In an address delivered January 12, 1916, before the Legislature of Manitoba the Hon. R. S. Thornton, minister of education, presented the following summary of the requirements then in force with respect to bilingual teaching in the different Provinces:

The public schools act of Manitoba required that—

When 10 of the pupils in any school speak the French language, or any language other than English as their native language, the teaching of such pupils shall be conducted in French, or such other language and English upon the bilingual system.

This clause was repealed by the Manitoba Legislature in March, 1916.

No similar clause appears in the school act of any other Province of the Dominion. In British Columbia, in Prince Edward Island, in New Brunswick, no provision concerning the language to be used in the public schools is noted, and the teaching of any language other than English is not provided for.

In Ontario the act (section 84) provides that it is the duty of the teacher to use the English language in instruction and in all communications with the pupils, except where it is impracticable to do so by reason of the pupils not understanding English. This is further modified by regulation of the department. Regulation No. 12 (3) provides:

In school sections where the French or German language prevails the board may, in addition to the course of study prescribed herein, require instruction to be given in French or German, reading, grammar, and composition to such pupils as are directed by their parents or guardians to study either of these languages.

Regulation No. 17 provides that:

Where necessary in the case of French-speaking pupils, French may be used as the language of instruction and communication, but such use of French shall not be continued beyond Form One, excepting that on the approval of the chief inspector it may also be used as the language of instruction and communication in the case of pupils beyond Form One, who are unable to speak and understand the English language.

In Quebec the French and English systems are entirely separate, and in each case the medium of instruction is the mother tongue, but no provision is made for any other language.

In Nova Scotia there is no statutory provision governing the teaching language, but in the regulations of the board of public instruction the Acadian school regulations authorize the appointment of a bilingual visitor of schools in French-speaking districts, a bilingual normal training course for French-speaking teachers, the use of authorized French readers in certain districts, but no language except English shall be imperative on any pupil. Nova Scotia is the only Province in which the word "bilingual" is used in the statutes or regulations outside of Manitoba.

In Alberta and Saskatchewan the provisions are identical, having been continued from the old Northwest Territories days. The section is as follows:¹

All schools shall be taught in the English language, but it shall be permissible for the board of any district to cause a primary course to be taught in the French language.

The board of any district may, subject to the regulations of the department, employ one or more competent persons to give instruction in any language other than English in the school of the district to all pupils whose parents or guardians have signified a willingness that they should receive the same, but such course of instruction shall not supersede, or in any way interfere with, the instruction by the teacher in charge of the school as required by the regulations of the department and this ordinance.

The board shall have power to raise such sums of money as may be necessary to pay the salary of such instructor, and all costs, charges, and expenses of such course of instruction shall be collected by the board by a special rate to be imposed upon the parents or guardians of such pupils as take advantage of the same.

From these extracts it will be seen that some of the Provinces recognize no other language than English, and others give a partial recognition to the French language. Ontario gives limited recognition to German and French, but in Manitoba equal standing was formerly given to any other language.

Complications that arise in Provinces where several different nationalities are concerned in preserving their languages are illustrated by the following report of conditions in the Province of Manitoba before the repeal of the clause of the public-schools act permitting bilingual teaching in the schools:

There are altogether 126 French bilingual schools in operation, employing 234 teachers, with an enrollment of 7,393 pupils and an average attendance of 3,465. Sixty-one districts operate German bilingual schools. These employ 73 teachers, with an enrollment of 2,814 and an average attendance of 1,841. One hundred and eleven districts operate Ruthenian or Polish bilingual schools, employing 114 teachers, with an enrollment of 6,513 pupils and an average attendance of 3,885. Thus there are altogether 16,720 pupils in the three groups of bilingual schools, which means, roughly speaking, that of all the children enrolled in Manitoba 1 out of every 6 receives his education in a school of this type.

It is further stated that—

The right to bilingual teaching led to a demand for the training of bilingual teachers. As a result there are at the present time the regular teachers' certificates, third, second, and first class professional, granted after the regular normal training, and, in addition, the following, all authorized by the advisory board:

French bilingual certificates, good only in French-English schools.

German bilingual certificates, good only in German-English schools.

Polish bilingual certificates, good only in Polish-English schools.

Ruthenian bilingual certificates, good only in Ruthenian-English schools.

¹ Sec. 136, p. 45 (Alberta).

These certificates should represent the regular English standing *plus* the additional language. In reality they represent the regular standing *minus*, being short either on the academic or on the professional side.

Candidates for French bilingual certificates study the English language, but do not write any examination on English grammar, English composition, or English literature.

Candidates for German bilingual certificates write English grammar and English composition at the entrance examination for promotion to the high school, but may omit the examinations in these subjects for a third-class certificate.

The Polish and Ruthenian students must take the regular examinations along with the English-speaking pupils in the schools, but are admitted to normal school after completing one year of high-school work (Grade IX), instead of two years (Grade X).

So far no demand has been made by the other nationalities for bilingual teacher training, but they have the same right under the act as those who have already received it.

In summing up the results of a special inquiry into the effect of the bilingual teaching, the minister says:

There should be one common-school teaching the things which are common to all, and leaving to individual effort those matters which are of private concern. There should be one standard of teacher eligible to teach in all schools of the Province. There should be a normal training to which all teachers should measure up. There should be a school inspector eligible to inspect every school under the Government. That is the ideal which, during all these years, seems to have been lost sight of. * * *

In an English-speaking country, as this is, a knowledge of English is more necessary than a knowledge of arithmetic. No matter what a man's attainments may be, the doors of opportunity are closed to him if he has not a knowledge of English, the common tongue. The teachers of non-English birth, many of whom have been bravely and conscientiously contending against adverse conditions will, with better educational standing, no longer be stamped sectionally, but will have a wider opportunity and a broader field in which to labor.

A grave injustice is being done to the children who do not receive a satisfactory education in English. Without that knowledge they grow up under a continuous handicap. We wish to give them the same consideration as is accorded to our own children, to fit them to earn their way through life, and to take their places as citizens in our Canadian nationality.

This question must be dealt with looking forward, not backward. Each generation must take its responsibility, and act in the spirit of its own times, yet ever watchful of the result to succeeding generations. We are building to-day for the Canada of to-morrow, and our common school is one of the most important factors in the work.

THE STRATHCONA TRUST AND MILITARY TRAINING.

The war has naturally increased the number of cadet corps which are formed in the several Provinces of Canada under the terms of the Strathcona Trust. The term is applied to the committee in charge of a fund given by Lord Strathcona for the encouragement of physical and military training in public schools. In accordance with the policy adopted, the interest on the invested money is an-

nually divided between the Provinces in proportion to the respective population. Of the entire income 50 per cent is allotted for physical training in the schools under the department of education, 35 per cent for military drill, and 15 per cent for rifle shooting. Every Province in the Dominion has accepted the terms of the trust and issued corresponding instructions. The military training is organized under the auspices of the executive council of the trust and effected jointly through the officers of the militia and the teachers and physical-training instructors in the schools. Cadet corps are formed for the purposes of the training. The following data relative to these activities were supplied by the secretary of the executive council of the trust:

Cadet corps statistics.

Dates.	Com- panies.	Cadets.
Mar. 31—		
1912.....	506	20,240
1913.....	759	30,300
1914.....	1,117	44,680
1915.....	1,222	52,880
1916.....	1,228	57,120
Increase from 1912 to 1916.....	922	36,880

Distribution of total, by Provinces, Mar. 31, 1916.

Provinces.	Com- panies.	Cadets.
Maritime Provinces.....	103	4,120
Quebec.....	451	18,040
Ontario.....	437	17,480
Manitoba.....	160	6,400
Saskatchewan.....	68	2,720
Alberta.....	131	5,240
British Columbia.....	78	3,120

The educational and other institutions from which these cadet corps are drawn are as follows:

Institutions represented.

Classes of institutions.	Com- panies.	Cadets.
Collegiates, high schools, continuation schools, universities, academies, and other colleges.	654	26,160
Public, separate common, and other preliminary schools.....	638	25,520
Municipalities and towns.....	128	5,120
Government institutions.....	8	320

Included in the above totals are 21 squadrons of mounted cadets.

AFFILIATIONS AND ATTACHMENTS.

Of the total number mentioned above, 44 companies or squadrons are affiliated with militia units, while 32 companies or squadrons are attached to units of the active militia.

UNIVERSITIES.

SPECIAL ACTIVITIES.

The universities of Canada, in common with those of all countries involved in the war, have made great sacrifices in this crisis. The strain of war falls heavily upon these institutions. The ideals for which they stand, ideals of the ethical and intellectual solidarity of nations, are obscured and their internal life disorganized. It is too early as yet to give any fair estimate of the new services rendered by the universities under these circumstances. They are illustrated by the partial record here given, pertaining to the leading universities of Canada. An impressive feature of the record is the scientific activity developed, and the promise which it holds of larger service in that period of reorganization which must follow the conflict and which will tax to the uttermost the scientific resources of the higher institutions in all countries.

THE UNIVERSITY OF TORONTO.

In the previous report of this series¹ attention was called to the responsibilities suddenly forced upon the universities of Canada by the war. Reference was also made to incidents growing out of the endeavor of the University of Toronto to maintain its character as a center of rational judgments and moral ideals in the midst of personal controversies having no direct effect upon the national welfare.

At the opening of the session of 1914-15 Dr. Falconer, the president of the University of Toronto, addressed a general assembly of the students in Convocation Hall, setting before them the views of the entente allies as to the immediate causes of the present war and urging them to consider carefully what their duty was in respect to these issues and to join the officers' training corps, which would prepare them for enlisting in active service when the call should come.

During the month of September, 1914, before the university opened, a group of the younger members of the staff undertook drill and were ready at the opening of the session to become officers of an officers' training corps, which was immediately established. The students enthusiastically joined this corps, and it was soon recruited far over the required strength.

In his report for the year ending June 30, 1915, the president notes that while the session of that year opened with about the same attendance as usual, as the weeks passed a steady stream of students to whom the conviction came that it was their duty to enlist for active service left the university. At the close of the session there

¹ See Rept. of Commis. of Educ., 1915, vol. 1.

were nearly 500 undergraduates serving in the ranks. These numbers steadily increased, and in April of the current year fully 2,500 graduates and undergraduates of the university were in active service, some 75 having fallen. Over 80 of the teaching staff were absent on military duty. In April, 1916, the militia department authorized the formation of two new units—a University of Toronto artillery battery, from which in July two drafts of 60 men each had gone overseas, and a University of Toronto officers' training unit for active duty.

Among special contributions made by the University of Toronto Dr. Falconer mentions the supply of skilled assistants from the body of medical students to staff a "casualty clearing station." The students taken from the fifth year of the course in medicine were granted degrees according to their standing in the class.

The university also made an offer to the Dominion Government of a "base hospital" of 1,040 beds, to be officered by members of the university staff and to be under the control of the university. The Dominion Government and the British war office accepted the offer, and the hospital was manned and equipped and sailed for England in May, 1915. It has been stationed in Saloniki since November, 1915, and has been strongly commended as one of the best equipped hospitals of the district.

The antitoxin laboratory cooperated with the Militia Department and the Canadian Red Cross Society in securing at greatly reduced rates a large supply of tetanus antitoxin. The demand was so great and the available supply so small, that it was resolved to begin the manufacture in the university laboratory, and for this purpose the Dominion Government made a grant to the university of \$5,000.

The testing of shells has also been conducted in the test laboratory of the university. The physics department also conducted researches for the British war office.

The university extension department has maintained courses of lectures on the principles involved in the war and the various phases of the struggle, organized patriotic meetings to promote enlistment, and in cooperation with the Speaker's Patriotic League has raised over \$300,000 for this purpose.

McGill University, which is second only to Toronto in the number of its students, had for several years before the war been giving a certain amount of attention to military studies. As stated in the annual report—

this work was undertaken originally in the conviction that, aside from any incidental advantages of training in drill and discipline, the study of military science was deserving of being accorded some place in an academic curriculum, and that a Canadian university might offer, without impropriety, to assist in providing what was felt, even before the war, to be the most urgent need of the service—the supply of a body of trained officers.

At the commencement of the session 1912-13 steps had been taken by the university for the organization of an "officers' training corps," and at the commencement of the following session (1913-14) the McGill Graduate Society took action for recruiting what was to be known as a provisional battalion. This effort was generously supported by private subscriptions and stimulated by the leadership of a highly experienced officer.

As a result of the attention given to military affairs, the university was able to respond immediately to the call for troops for over-seas service. Five companies, which were sent forward in a period of 14 months ending in August, 1916, to reenforce the Princess Patricia's Canadian Light Infantry, were trained successively on the university grounds, the men being quartered for the most part in the university buildings and officered by university men. Other universities in Canada contributed to the composition of these companies, but the general control was centered at McGill. The work of organizing and drilling continued after these companies had departed. The university was also authorized to raise a battery composed solely of McGill men. The full strength of the battery, which comprised four guns, was obtained, including 7 officers, 1 warrant officer, and 151 noncommissioned officers and men. The total enlistment from the university included 73 members of the staff, 892 graduates, 547 undergraduates, and 176 past students.

The university also contributed a general hospital the personnel of which, comprising 21 officers, was chosen from the teaching staff of the medical faculty holding hospital appointments, and an equipment for a field hospital, comprising 520 beds, and a force of 200 trained doctors, nurses, officers, and soldiers.

Laval University, Montreal, equipped and recruited a general hospital similar to that of McGill, with a total of 300 in all ranks and 1,040 beds. Of the university staff six French professors and two English were on active service at the end of 1915, while a battalion of 600 students was in training with organization practically completed.

The smaller universities and the technical colleges have been equally active. In several instances, notably that of the University of Alberta, the entire student body has been organized into a battalion and kept up a constant drill. All the universities have made special arrangements with respect to the scholastic standing and the award of diplomas to students engaging in the service.

A UNIVERSITY CONFERENCE.

Upon the invitation of the University of Toronto, in June, 1915, a conference was held of representatives of higher education in the Do-

minion. At this conference, which was largely attended, matters of great interest to the welfare of the university and the future of higher education in the Dominion were discussed. It was particularly urged that the time had come when the professional schools must be maintained at a high standard in order to retain the most promising students who, without unusual inducements, would be drawn to the leading universities of the United States and other foreign countries. For the same reason the importance of larger development and liberal support for graduate departments was emphasized, and it was agreed that measures should be taken for enriching the older universities in these directions in order that they might offer adequate opportunities for their own students to do graduate work at home, and also to draw to themselves the graduates of the smaller colleges of the east and the newer universities of the western Provinces. The senate of the University of Toronto had already taken steps to meet these increasing requirements by a resolution asking the board of governors to create a new board of graduate studies which should have under its charge the advance work of the existing faculties of arts and medicine, and which should be prepared, by the offer of scholarships and by the possession of ample equipments, to meet the requirements of ambitious students in all parts of the Dominion.

The normal strength of the Canadian universities, like that of all universities in the warring countries, has been reduced during the current year. The statistics which follow relate to the scholastic year 1914-15, which opened with the usual complement of university students, but suffered great reductions before the season closed.

University statistics.

Names.	Location.	Year.	Students.
Ontario:			
McMaster University.....	Toronto.....	1913-14..	354
University of Ottawa.....	Ottawa.....	1914-15..	623
Queen's University.....	Kingston.....	1914-15..	1,502
University of Toronto.....	Toronto.....	1914-15..	4,428
Western University.....	London.....	1913-14..	235
Quebec:			
University of Bishop's College.....	Lennoxville.....	1914-15..	59
Laval University.....	Montreal.....	1914-15..	1,927
Laval University.....	Quebec.....	1914-15..	368
McGill University.....	Montreal.....	1914-15..	1,967
New Brunswick:			
University of New Brunswick.....	Fredericton.....	1914-15..	142
University of Mount Allison.....	Sackville.....	1914.....	188
Nova Scotia:			
Acadia University.....	Wolfville.....	1914-15..	240
Dalhousie University.....	Halifax.....	1912-13..	400
University of King's College.....	Windsor.....	1914-15..	71
University of St. Francis Xavier.....	Antigonish.....	1914-15..	182
Alberta:			
University of Alberta.....	Edmonton.....	1915.....	440
Saskatchewan:			
University of Saskatchewan.....	Saskatoon.....	1914-15..	355
Manitoba:			
University of Manitoba.....	Winnipeg.....	1914-15..	1,135
British Columbia:			
University of British Columbia.....	Vancouver.....		(²)

¹ In arts, 312; in professional faculties, 596; in special and extension courses, 227.

² Organized in 1912, to be opened for students in 1915.

CHAPTER XXXI.

EDUCATION IN THE LATIN-AMERICAN STATES.

THE SECOND PAN AMERICAN CONGRESS.¹

The most important event in the records of the Latin-American countries for the current year was the meeting of the Second Pan American Scientific Congress, which convened at Washington December 28, 1915, and held daily sessions for two weeks. The program of the educational section of the congress was exceptionally strong; not only were problems effectively treated, but those peculiar to the Latin-American countries were very fully presented by their respective delegates. Prominent among these problems was that of extending the systems of primary or popular education.

At the time when the several States referred to achieved their independence and were organizing their institutions there were strong pleas on the part of their political leaders for the liberal support of primary schools accessible to all the people. French influences were then dominant, but there were wanting in the newly organized States the conditions and the resources for carrying this purpose into effect, and as time passed the educational activities were directed toward secondary and higher education, following the inherited customs and ideals of the leading classes. The present renewal of interest in this subject is due rather to industrial and commercial interests than to the indulgence of political doctrines, and consequently there is a general turning to the United States for guidance in the endeavor to develop effective systems of primary education. This disposition was not only manifested in the sessions of the congress, but in a more significant manner by the educational itineraries throughout the United States which followed after the congress adjourned.

The increased consciousness of the importance of primary education is accompanied in all the States here considered by an equal recognition of the need of bringing secondary schools into closer relation with the interests of modern industrial requirements. Indeed, the extension of primary education and the reform of secondary education are simply two aspects of one problem. Although on the part of delegates from sister Republics there was a candid admission of

¹ See also Ch. XXVIII, p. 476 of this report.

the superiority of the United States in respect to this problem, emphasis was also placed upon those elements of public education which have been more highly developed in the former countries. This advantage is justly claimed in respect to the fine arts, music, painting, and the plastic arts, for which provision is made at public expense in nearly all the Latin-American States.

From the want of similar development in the countries participating the discussion of topics before the congress was, naturally, somewhat one sided. It was noticeable, however, that rural education offered common ground. It is true that the United States has gone further in special provision for this part of the community than any one of the States of Central or South America; at the same time the work is in a formative stage in the United States, and, therefore, the means of equalizing opportunities between the children of urban and rural communities excites the same attention as in other countries which have large rural populations not adequately provided with the means of primary instruction. A second problem of vital interest in all the Americas is that of the adaptations desirable in respect to schools that continue the education of the young after the elementary stage is passed. In treating these topics delegates representing the different stages of educational development in the United States and in Latin America were equally suggestive. The promotion of cordial relations between all the Americas, through the agency of the schools, was also urged with great earnestness by several of the visiting delegates.

The following statements and citations from addresses delivered before the congress illustrate the spirit that prevailed throughout the proceedings.

Dr. Luis A. Baralt, delegate from Cuba, in an address on the reform needed in "Pan American education," said:

Popular instruction and culture must not only be extended to all men and women but also intensified, modernized, and, above all, directed to the end of making free and noble citizens, conscious of their rights and duties. This can not be accomplished without proper attention to an aim generally ignored, or at least neglected, almost everywhere, and which yet constitutes the supreme object of education, namely, the building of a harmonious world in the minds of the scholars. A department for general culture and civic instruction should be added to all schools for manual work and technical training established for the education of the working classes—a necessary addition to all the institutions for a similar purpose now existing in the world.¹

Dr. Ernesto Nelson, delegate from Argentina, in a paper on the secondary school and the university which has been widely circulated,² cited Dr. John Dewey in the support of his declaration that while

¹ As reported in the Daily Bulletin, Second Pan American Scientific Congress, Jan. 8, 1916.

² See Bureau of Education Bulletin, 1916, No. 10.

"the curriculum may have been enriched by the progress of science, it still remains the official catalogue of facts the student has to acquire." With regard to the relations of the lower schools to the university, Dr. Nelson said:

Had the secondary school disconnected itself from the university, had it been obliged to respond, as it is beginning to respond to-day, to the demands of modern life, its conservative methods would have long ago been superseded by more liberal principles of education. To create and keep its patronage, the secondary school would have appealed to the practical sense of the community, catered to the needs of modern life, somewhat in the way the modern public library is doing to-day. * * *

The overwhelming cultural prestige of the university has made education retain much of its character as a system of organized restriction, just as when education had no meaning save as that of a preparation to a privileged position in an aristocratic society. * * *

The salvation of the secondary school, therefore, lies in abandoning university standards in the valuation of primary and secondary education, in asserting positively its own standards of culture, founded in the perfection of those activities whose operation makes man attain his full spiritual stature.

Peculiar weight was added to this opinion from the fact of Dr. Nelson's well-known success in giving new ideals to the modern secondary school which is organically related to the University of La Plata.

One of the most impressive addresses delivered before the congress was that of Dr. Jose M. Galvez, professor of English in the University of Chile and vice president of the National Educational Association of Chile, who discussed the subject of Pan American understanding. In his introduction Dr. Galvez characterized the two groups of European culture in America, corresponding on the one side to the insular or individual part, and on the other to the continental or collective part, which have developed in Europe since the times of Elizabeth and Philip II. In this connection he said:

You of the United States have, an essential feature of your culture, the inheritance of British individualism which you have made to flourish on the American soil of the north, where it has borne wonderful results through the splendid activities of great individuals.

We of Latin America have the collectivism of continental Europe as an essential feature of our cultural inheritance, which we have developed in the southern lands of America. Whatever has been achieved there—and there has been much—has been done mainly by the Governments. People look up generally to the Governments for whatever is yet to be achieved—and that is still a great deal more.

According to Dr. Galvez the problem of Pan American understanding involves the union of these two currents in a common "ideal of continental solidarity, within the bounds of liberty and mutual respect." For the promotion of this common ideal the Pan American Scientific Congresses seek to give common direction to the general cultivation of the sciences throughout the continent. In considering

the specific means of accomplishing this purpose, Dr. Galvez emphasized first, language. On this subject he said:

The first aspect of understanding between individuals and between peoples is the idiomatic one. In every understanding language is not an end in itself, but it is an indispensable means for reaching that end. It is the door through which the foreigner must pass if he would enter the building of a strange culture.

For this reason Dr. Galvez recommended the extension and deepening of the study of English in Latin America and of Spanish in Anglo-Saxon America.

The second means, noted for the promotion of Pan American understanding, was the study of science, taking the term in the broadest sense as philosophy. To this end Dr. Galvez urged the establishment of "chairs of scientific philosophy that shall be independent of all professionalism and whose object may be to disseminate knowledge of philosophy in general, and especially as to the development of philosophic ideas in America." In this conception of the subject were included scientific chairs of the history of religions, with the special object of disseminating knowledge in regard to the development and cultural influence of Christianity on the American continent.

Great interest was manifested in the auxiliary conferences of women, in which many delegates from the South American countries participated. The discussions before this section related chiefly to the social welfare of women and children and the educational means for its promotion. Prof. Eduardo Monteverde, professor of the National University of Montevideo, in an important paper discussed the subject from the standpoint of woman's influence as mother and head of the home. In order that her influence exerted through this medium may be intensified, he recommended that the curriculum of higher studies should be extended to include human anatomy and physiology, hygiene, physical education, psychology, social atmosphere, chemistry, domestic economy, civics, religion, social problems, and moral problems.

MEXICO.

The de facto Government of Mexico is developing plans for vigorous support of public instruction in the capital city and the national territory, and as a basis for future action has recently published a very complete educational census of the Federal district and territory, which shows the situation in 1912. At that time there were, under the charge of the minister of public instruction, 649 primary schools, with a total enrollment of 110,661 and a teaching force numbering 3,839. These schools were maintained at an expenditure of \$1,636,406. There were also 19 institutions for special or higher education, with an enrollment of 9,634 students and a teaching per-

sonnel numbering 1,425. The expenditure of these more advanced institutions exceeded that for the primary schools, amounting in all to \$3,993,977. Under the head of higher education are included the professional faculties which were legally transformed into the University of Mexico in 1910, but have not yet fully realized the organic union authorized.

Two features of the university organization deserve special mention. It includes a preparatory section, which registered 1,263 students in 1912, of whom 48 were women, and also a graduate school (*Escuela de Altos Estudios*) which prepares candidates for the doctorate in sciences and letters. This institution registered 98 students in 1912, of whom 11 were women. Since these statistics were published, the Government has established a school of domestic science for women in the city of Mexico.

The secretary of public instruction has recently issued a circular calling the attention of all heads of families to the compulsory school-attendance law and their obligations under penalty to secure the instruction of their children.

Recent advices from Mexico show promising activity in respect to education in States removed from the zone of internal disorder. This is particularly true of Yucatan, in which several agricultural schools have been established under expert management. A school for teaching theoretical and practical surveying in connection with the land department was also established during the year, opening with an attendance of 50 pupils.

In the State of Coahuila a decree has been issued forbidding the employment of children under 14 in factories, establishing compulsory education, and authorizing provision for the industrial training of men and women.

CENTRAL AMERICA.

MOVEMENT FOR EDUCATIONAL UNION.

The movement for a closer union of the five States in Central America, which has been the chief subject of discussion in six interstate conferences, has been promoted during the present year by the International Central American Office, which, in its organ, the *Centro America*,¹ proposes a plan for a uniform system of public instruction in the several States. The plan is elaborated for the purpose of exciting general discussion, which, it is hoped, will lead to an agreement as to the main features of a common system.

The proposed program is extremely comprehensive, covering six years for primary schools, of which three are called "complementary," or higher grades.

¹ See issue for "Enero, Febrero y Marzo de 1916," pp. 1-11.

The program of secondary education covers five years; four years are assigned for the normal schools.

Attention is directed particularly to the means of extending and improving the rural schools and for increasing practical training as a correction of the excessive tendency to philosophical and literary subjects. Among the practical courses provided for in the program are those in arts and trade for both men and women—telegraphy, electricity, commerce, agriculture, mechanics, and engineering. To the usual courses in mining and civil engineering a course in municipal engineering is added.

Directly in line with this effort is the action of the Government of Salvador in giving official approval through the minister of public instruction to a society recently organized in Santa Ana for the protection and material assistance of needy students. The statutes of the new organization provide that in addition to the organizing and contributing members there shall be active and corresponding members composed of teachers in Salvador and other Central American countries.

Educational activities in the several States are stimulated by the improved commercial prospects and the growing intercourse with the United States, and also directly by observation of the working of the school system established in the Canal Zone. The importance of an annual educational census is generally admitted not only as a means of giving each State knowledge of its own condition, but of promoting common standards and the interchange of students. Various propositions have been made looking to the adoption of a common statistical scheme, but circumstances have not yet been favorable to the realization of such a plan.

A basis for closer educational union between the States is found in the interests that are at the present time paramount in all. Experiments in rural education, following the example set by Costa Rica, as noted in previous reports of this series, are multiplied.¹ The demand for better-trained teachers has led to preliminary measures looking to the establishment of a central normal school and a system of student exchange which can not fail to increase fraternal relations and the adoption of common educational standards. For example, the Government of Salvador has accepted the offer of two scholarships in the Heredia Normal College, made by the Government of Costa Rica to Salvadorean students.

In each one of the States provision for technical and industrial education is increasing, accompanied by a tendency to send selected students to foreign technical schools. In 1914 nine students from Salvador were maintained in foreign technical schools. Of these,

¹ See Rept. of Commis. of Educ., 1914, vol. 1, pp. 665-667; 1915, p. 650.

three were sent to the United States; two additional students were also assisted in attending a school of engineering in this country.

The latest statistics pertaining to the universities of Central America are given in the university table in this chapter. For statistics pertaining to elementary education, see Table 1. chapter 37.

SOUTH AMERICA.

CURRENT ACTIVITIES AND DISCUSSIONS.

South America comprises 10 independent Republics which, as regards education, present many common characteristics and also great diversity. In all the States higher education has received more attention in the past than primary schools for the common people, but in this respect a marked change has taken place within a few years, and in the majority of the States at present the latter interest is paramount both in general discussions and in legislative measures. The importance of a periodical survey of educational conditions is everywhere recognized, but has only been attempted in a few States and not upon a uniform plan in these; in other States partial surveys have been carried out. At present, therefore, it is impossible to make a comprehensive survey of education excepting in the case of a very few States.

From a careful study of the statistics available, it appears that four States of South America have made decided progress in the effort to provide adequately for the elementary education of all the people. Argentina excels in the proportion of the population under instruction, viz, 11.9 per cent; Chile follows with 10.7 per cent enrolled; Paraguay reports 8.4 per cent; and Uruguay, which has made very careful distinction between public and private schools, had 7.2 per cent of the population in the former schools in 1914; the proportion was raised to 8.8 per cent by the addition of the enrollment in private primary schools.

Chile, which has the advantage of a system of primary instruction, well organized for a longer period than that of the neighboring States, has recently taken active measures for improving school buildings throughout the State. By a law passed during the current year Congress has authorized the President to invest 10,000,000 pesos (\$3,650,000) in the construction of schoolhouses on sites now held by the Government. The funds will be raised by bonds, which will be issued in specific amounts for four successive years. Of the entire fund the sum of 30,000 pesos (\$1,095) is to be allowed as prizes for designs and estimates offered for the proposed buildings.

The Venezuelan Bureau of Statistics has carried out the purpose of publishing an annual yearbook presenting a survey of the activities of the Government. The work has excited favorable comment in

critical journals of Europe, and is cited in a list of model annuals of this character in an article on the subject published by *La Statistique General de la France*. This work illustrates the thorough manner in which Venezuela has set about the endeavor to achieve full knowledge of social conditions in the State, including in this scheme the survey of schools and other educational agencies.

The advantage of periodical censuses is plainly indicated by the results in Paraguay. The director general of the statistical department of this State includes in his annual report for 1914 statistics of education, which, as compared with the similar particulars for 1911, show a gain in the three years of 50 primary schools and 21,497 pupils. This is convincing proof that the recent efforts of the Government in behalf of the education of the people have been fruitful. The determination of the authorities in this State to improve the quality, while increasing the number, of the rural schools is indicated by the establishment in 1914 of a rural normal school at Villa Rica. At the close of 1915 more than 80 students graduated, and for the current year the graduating class numbered 120. Thus, a force of trained teachers, a large part of whom will be employed in the rural schools, enters upon the service just at the moment when new programs for primary schools have been issued with specific directions as to the means of adapting the instruction directly to the needs and vital interests of the children. These programs provide for a graded course of primary instruction covering six years, although it is recognized that in the rural districts pupils can hardly be expected to advance beyond the fourth grade. Because of this limitation, lessons in useful knowledge are begun in the first grade and continued through the third, after which they are replaced by more formal lessons in natural science, and in civic and moral instruction. Thus, the fourth year is made particularly informing, while at the same time a new element is introduced by the addition of geometry and drawing at this stage.

The report for Uruguay shows a decided increase in the public elementary schools in 1914, as compared with 1913. This result is due chiefly to the increased number of public schools in the rural districts which have been the chief subject of attention in recent years. Experience shows that these schools are the chief factors in the development of the country people, since they not only benefit the children, but also entire families because of the influence which the schoolmaster exercises in the neighborhood and the respect that he inspires by reason of his superior knowledge. In 1906 there were only 400 public primary schools, as against 991 in 1914, so that within a decade the number more than doubled.

Recent reports received from several States of South America abound in discussions of primary education, its administration and

purposes, not unlike those which appear in State and city reports of the Union. As an example may be cited a memorial addressed during the year to the minister of public instruction and agriculture in Argentina by the educational council of the Province of Santa Fe, the second in population in the State. The memorial criticizes the present school law as antiquated in principles, and even absurd, in the light of modern requirements. Complaint is made that the failure of the law to confer autonomy upon the council has resulted in uncertainty as to the relative rights of that body and the director general. Although the school law does not recognize the supreme authority of the council, in practice this is admitted, and it is therefore desirable to legalize the actual situation.

The same memorial dwells upon the importance of the pedagogical conferences which are promoted by all the authorities concerned in school management. A program cited in the memorial which was prepared for a conference held at Santa Fe during the year is extremely suggestive as regards topics and their assignments. The program is as follows:

1. Methods of teaching orthography (the inspector general).
2. School discipline (the sectional inspector).
3. Sensation and perception (Dr. José Oliva).
4. Association of ideas (Dr. José Oliva).
5. Methodology of arithmetic (the vice director of the Belgrano school).
6. Methodology of reading (the director of the Sarmiento school).
7. Methodology of the national language (the subinspectors of the first section).
8. Process of thinking (assigned to a teacher).

In Uruguay the system of public instruction has developed beyond the legal requirements, and at the request of the minister the well-known inspector of primary instruction, Sr. Abel Perez, has formulated the project of a new law which was submitted to the legislature in the fall of 1915. This project provides for a still higher development of the rural schools, a more perfectly organized inspection service, and large extension of medical school inspection.

The independence of municipalities, which is characteristic of the South American States, has two effects upon the progress of public education. On the one side it often stands in the way of the enforcement of a general school law, but again individual municipalities enact orders far in advance of the legal provisions. An example is afforded by the action of the mayor of Santiago de Chile who has recently issued an order relative to the compulsory instruction of children from 6 to 14 years of age, which is particularly explicit in regard to the obligation of the fathers or guardians of children in this respect. Violations of this law are punishable by fines amounting in the first case to 10 pesos (\$1.80 United States currency), and increased to 20 pesos in the case of a second infraction. If the

father or other responsible guardian fails to pay the fine incurred, he is subject to imprisonment for one day for each 5 pesos of the fine. The duration of this arrest, however, may not exceed five days in any case.

In the majority of the South American States secondary education is provided in schools under private management, often denominational in character. They are subsidized, as a rule, by their respective Governments, but the complaint is general that they follow traditional methods of instruction. For this reason, probably, the tendency to establish public secondary schools is increasing. At the same time the effort is made to infuse a new spirit into the private secondary schools in order that they may meet more fully the requirements of the developing industrial life.

Peru, which has made several unsuccessful efforts to reorganize the system of education during the last decade, is gradually modernizing the system and the work of different departments. Recent attention has been concentrated upon the secondary schools (*colegios*) which provide for a four years' course of study much too elaborate for thorough work in the limited period. The *colegios* include 27 maintained by the Government, which offer a promising field for improvement. The private schools of the same grade of necessity follow the official programs, since they all prepare for the same examinations. The completion of the course is required for admission to the university faculties of letters and philosophy and of natural sciences. In these faculties students complete their preparation for the more highly specialized professional faculties.

The arrangement by which students of medicine have the opportunity of completing their preliminary studies in the university faculty of natural sciences tends somewhat to obscure the importance of these subjects in the scheme of secondary instruction. The latest programs, however, are intended to provide a better-balanced course by increasing the time assigned to the natural sciences and general history.

One of the most flourishing secondary schools in South America is the national college, Vicente Rocafuerte at Guayaquil, Ecuador. It comprises, as is frequently the case with the so-called secondary schools, primary and higher sections to which are added special departments. The programs of the higher section, it is recognized, present a scheme of work that can not be accomplished in three years. The special sections of the college are commercial and agricultural in character. The latter has recently been provided with laboratories for the practical study of agriculture, physics, chemistry, and vegetable physiology.

It is a matter of interest that the demand for the English language has greatly increased in this college during the past three years, as

appears from the fact that the proportion of students taking this language increased from one-third of the total number in 1913 to eleven-twelfths during the present year. The French language suffered corresponding decrease. This change is attributed to the growing interest in the question of Ecuador's foreign trade, largely with English-speaking countries, and the popularity of the professor, who is a graduate of Dartmouth College.

PUBLIC INSTRUCTION VERSUS INDUSTRIAL AND SOCIAL WELFARE.

As a result of the awakened interest in economic conditions throughout South America, there is a rising demand for various forms of specialized education. Little provision has thus far been made for the higher orders of technical training, but schools of arts and trades have long existed in the chief cities and their number is at present increasing. The interests of women are considered in this activity and either separate departments for feminine industries are organized in existing schools or new schools created.

A law pertaining to industrial education has recently been passed in Uruguay which provides for a graded system of industrial schools, including normal schools to prepare teachers for this service. The school of domestic arts authorized by a decree of August, 1914, has been opened at Montevideo, and it is proposed to establish several centers for similar instruction in different parts of the country.

In Venezuela provision has recently been made for a school of arts and crafts for women at the national capital.

One of the most important agencies for promoting industrial education is the Sociedad de Fomento Fabril in Chile. This society, with the aid of the Government, maintains 12 industrial schools and also an industrial library at Santiago, which is open to the public every day and is freely consulted.

Agricultural education excites more and more attention every year. The Colombian Government provided for a school of sericulture by decree of December 15, 1915, and appropriated money for the purchase of the needed equipment. The school will be adequate for 30 pupils, who will be selected from the applicants by the director, preference being given to needy and deserving women who show some aptitude for the work. The silk spun at the school will be classified and sold for the benefit of the Government silk-culture fund.

An agricultural and veterinary school is to be established in the hot lands of Colombia, and it is reported that contracts have been made by the Colombian Government with foreign experts to assist in organizing this institution and in promoting general interest in the subject of agricultural education.

With respect to commercial education, South America has been stimulated by the example of France and the southern countries of Europe in which this subject has always been one of especial interest. At present the increasing opportunities of trade have given a new impulse to this subject, which has resulted in several very important measures of general interest.

In Argentina a committee of six specialists was appointed in 1912 to report on courses of instruction for the Superior National School of Commerce at Buenos Aires. As a result elaborate courses in accountancy, business management, and salesmanship have been adopted and laboratories provided for the students prepared for practical work in chemistry and micrography as applied to processes and material.

There are also in Buenos Aires a university faculty of economic sciences and a commercial school for women. The public provision for commercial training includes commercial schools at La Plata, Bahia-Blanca, Tucuman, and Concordia. In 1913 the whole number of graduates from these schools was 140, the total enrollment 2,856, and the annual cost of the schools \$1,398,770.

In Chile a "general commission of commercial education" has been created by law to advise the Government in respect to the administration of institutions for mercantile instruction. The minister of public instruction is appointed as chairman of this commission, and the five remaining members appointed by the president of the Republic must include one merchant, one professor of financial education, the inspector of institutions for special education, and the president of the board of the well-known commercial institute of Santiago.

In 1914 there were altogether 11 commercial institutes in Chile, with 3,691 matriculates. The total expense for these was \$967,912.04.

The scope of the school of commerce at Caracas, Venezuela, has recently been expanded by the addition of a school of modern languages. There are commercial schools also at Bolivar and Maracaibo, in this State.

At Montevideo, Uruguay, there is a national school of commerce, under the administration of a council and director appointed by the executive. The course of instruction is arranged for four years, leading to the diploma of expert mercantile accountant. The equipment of the institution includes a valuable museum. In 1913 the number of students was 116.

Social science has long been a favorite subject of discussion on the part of leading men in South America, many of whom are graduates of the university law faculties, which generally comprise this subject in their curricula. This interest is having a practical outcome in endeavors for relating public instruction to other branches of public administration. Among evidences of this tendency may

be noted the measure for creating a bureau or institute of labor which was introduced in the Congress of Uruguay during the present year. It is proposed that the work of this bureau should be divided into three sections, under the ministry of the interior, the ministry of justice and public instruction, and the ministry of industries, respectively.

The movement for social improvement in Chile has led to the appointment of a commissioner on criminology to be under the general direction of the minister of justice. The instructions to the new official call for an annual report on the subject, accompanied by recommendations of measures for the prevention of crime, the reform of delinquents, and the intelligent management of prisoners. As an aid to this service, a laboratory of experimental psychology will be established in the penitentiary at Santiago. It is predicted that the researches there conducted will have a value for education as well as for reformatory activities.

The Argentine Republic has celebrated during the year the jubilee of its independence. The program of ceremonies is marked by the number of congresses included which bear directly upon the educational and social welfare of the people. A congress on social sciences, organized under the auspices of the Argentine Government, was held at the city of Tucuman in July, all the American States, north and south, having been invited to participate. The committee or organization in charge of the affair was selected by the minister of justice and public instruction of the Republic.

The first Pan American Child's Congress was also announced as a feature of the celebration, and its sessions took place in August in the city of Buenos Aires.

The Bolivian Government, which in its recent measures for improving the entire system of education has emphasized the importance of studying the aptitudes and individual condition of children, was well represented in the child's congress held at Buenos Aires, and furnished for the accompanying exhibit several collections illustrating improved methods of teaching and also of promoting the general welfare of the young. Arrangements have been made for a national education exhibition to be held at La Paz, Bolivia, for the purpose of interesting the people in the work of schools and colleges.

BRAZIL.

Within an area exceeding that of the United States exclusive of Alaska, the Republic of Brazil comprises a population of twenty-one and one-half millions, which is equivalent to about 43 per cent of the entire population of South America. It is organized in 20 States and the Federal District. Beyond the limits of this district the Cen-

tral Government has no control of elementary schools, but is responsible for university and secondary education throughout the country. The individual States not only are independent in the management of their school affairs, but municipalities enjoy large freedom in this matter. These conditions indicate the great obstacles that must be overcome in the effort to establish universal education. Viewing the country as a whole, it would seem that little progress has been made in this respect, since the percentage of illiteracy is estimated at over 80 per cent of the entire population. On the other hand, it is well known that Brazilians of the ruling class are highly cultured, have a passion for the arts and sciences, and a truly cosmopolitan spirit. Speaking and writing French is an invariable accomplishment, promoted undoubtedly by the fact that the native language, Portuguese, is generally unfamiliar to other people.

The Federal District has an admirable system of schools, and Rio de Janeiro has long enjoyed distinction as a center of culture and refinement. In this city are several schools of renown, among them a technical school which probably has no superior in South America, and a higher school of agriculture and veterinary medicine.

The awakened interest with respect to popular education is indicated by a decree of April 5, 1911, creating a Federal board of education, with authority to establish schools in the States which neglect their duty in this particular. An interesting evidence of the tendency toward centralized control, and also of the determination to preserve intact the language and institutions characteristic of Brazil, is afforded by an animated discussion which took place during the current year in the Brazilian Chamber of Deputies. The exciting subject was a bill providing for modifications of a draft law amending the present law governing secondary and superior instruction. The purpose of the draft law was to prevent the maintenance of any schools in Brazil in which any foreign language should be used to the exclusion of Portuguese. It provided that the Brazilian language shall be taught in all schools of any grade whatsoever maintained by private individuals or foreign associations, and subsidized or not, directly or indirectly, by any European Government, whether their purpose should be the diffusion of primary instruction, religion, technical tuition, or some other object not specified.

The discussion of the bill turned on the authority of the Federal Government to intervene in this matter in States having independent control of their own schools, and, while there was general agreement as to the importance of such a requirement, it was eventually ruled that its enforcement was not within the competency of the Central Government. It was therefore decided that the desired regulation should be embodied in the provisions of law of the various States rather than enacted as a Federal law.

Notwithstanding the independence of the individual States, and the wide difference between them in respect to educational progress, it is noticeable that as the States become more and more active in this matter they tend to approach uniformity in respect to their school systems. For this reason the more advanced States may be said to represent an ideal toward which the whole country is moving.

The State of Sao Paulo, which ranks ninth in the Republic in respect to area and second in population, having in 1900 two and one-quarter million inhabitants, has recently published complete school statistics for 1912, which are here summarized:

School statistics of Sao Paulo.

Classes of schools.	Pupils at the capital.	Pupils in the interior.	Total pupils.
Group schools and infant schools.	20,925	49,126	70,051
Union schools.		1,591	1,591
Separate schools.	6,282	40,876	47,158
Night schools.	1,671	3,223	4,894
Model schools.	119	503	622
Reform schools.	76		76
Classes for physical training.	357		357
Manor schools.		882	882
Gymnasias (maintained by State).	329	251	580
Polytechnic school.	327		327
Normal schools:			
State.	2,532	2,019	4,551
Municipal.		14,465	14,465
Private.	24,190	23,543	47,733
Apprenticeship schools:			
Handicraft and trade.	206		206
Nautical.		132	132
Faculty of law.	481		481
Total.	57,495	136,611	194,106

The budget of Sao Paulo for 1914 carried a total of \$1,175,784 for education, of which amount \$935,177 was actually expended for the maintenance of 1,108 grammar schools, 963 subsidized private schools, 29 grammar schools operating in special buildings and graded, and 1 normal school. The expenditure exceeded that for 1913 by \$81,143.

As industries develop, schools multiply. This is true of elementary schools and also of schools for industrial and technical training. For instance, the State of Minas Geraes has recently assumed charge of the cotton industry, and to further its development the services of an expert have been engaged for the practical teaching of cotton culture. It is proposed to establish demonstration fields in suitable zones where the processes of planting and cultivation, the preparation of the product, and the use of implements and machines will be taught. Machines are provided by the Government at cost price.

In like manner the State of Sao Paulo, which has recently made great effort to diversify its resources, has established at central points State agricultural colleges and institutes where farming and cattle

raising are scientifically studied. Technical instructors have been brought from abroad, and the advantages of this policy are proved by the rapid advance in agricultural productions. Between 1900 and 1912 the area planted very nearly doubled, and the production, measured by tons, increased by 60 per cent.

UNIVERSITIES.

The following statistics pertaining to universities in the Latin-American States were derived from official reports and catalogues, or from Minerva.

Statistics of universities in Latin America.

CENTRAL AMERICA AND CUBA.

Designation and location of universities.	Date of foundation or reorganization.	Date of statistics.	Professors and instructors.	Students.
Universidad Hispano-Americano, Guatemala ¹.....	.....	1914	² 11	² 50
Universidad Central Tegucigalpa, Honduras ¹	1845	.....	20	54
Universidad Nacional, Salvador.....	1913	.....	.....	200
Universidad de la Habana, Cuba.....	1728	1914	.....	1,184

¹ Information derived from Minerva.

² Faculty of law only, the four other faculties not reporting.

SOUTH AMERICA.

Argentina:				
Universidad Nacional, Buenos Aires.....	1821	1914	375	5,054
Universidad Nacional, Cordoba.....	1613	1913	130	781
Universidad Nacional, La Plata.....	1905	1914	150	800
Bolivia:				
Facultades de derecho y medicina, La Paz.....		1908	14	151
Chile:				
Universidad Catolica, Santiago.....	1888	1914	62	758
Universidad de Chile, Santiago.....			88	1,500
Instituto Pedagógico, Santiago.....	1889	1913	14	216
Colombia:				
Universidad Nacional, Bogota.....		1913		587
Facultades Departamentales (6).....		1913		345
Ecuador:				
Universidad Central, Quito.....	1895	1915	41	182
Universidad del Guayas.....		1915	27	128
Universidad del Azuay.....		1915	20	155
Paraguay:				
Universidad Nacional de Paraguay, Asuncion.....	1890	1914		
Instituto Paraguayo, Asuncion.....	1895	1914		166
Peru:				
Universidad de Cuzco.....	1598	1913		170
Universidad Mayor de San Marcos, Lima.....	1553	1914		
Uruguay:				
Universidad de la Republica, Montevideo.....	1849	1914		1,372
Venezuela: ¹				
Facultad de medicina, Caracas.....	1915			63
Universidad los Andes, Merida.....		1914		89

¹ The National University at Caracas has been temporarily closed pending its reorganization.

BRAZIL.

Higher education in Brazil is provided by separate professional faculties or schools which up to the present time have not been organized as universities. These independent institutions are situated in

the principal State capitals and are either national—that is, supported by the national treasury—or free from Government control and maintained by fees, subscriptions, etc.; the latter have practically the same curricula as the national institutions, since all are preparing for like professional careers. The education law of 1911 provided for the university form of organization, toward which important influences are now tending. Technical education of a high order, which in other States of South America is represented by university faculties as well as by technical schools, is the province of special schools in Brazil. The faculties and schools for which recent statistics have been reported are as follows, the date of report in each case being 1913:

Bahia: ¹

Faculdade de Medicina, Cirurgia, e Pharmacia (1808); 44 professors, 1,850 students; annual expenditures, \$300,000.

Faculdade livre de Direito (1890); 23 professors, 200 students.

Escola Polytechnica (1896); 22 professors, 150 students.

Bello-Horizonte: ¹

Faculdade livre de Direito (1892); subsidized by the State of Minas-Geraes.

Porto Allegro:

Faculdade livre de Medicina, Cirurgia e Pharmacia (1899); 34 professors, 300 students.

Faculdade de Direito (1900); 150 students; annual expenditures, \$20,000.

Escola de Engenharia (1894); 35 professors; 218 students.

Instituto Technico Profissional (1895); 30 professors; 350 students.

Instituto de Electrotechnica; 6 professors, 30 students.

Instituto de Agronomia e Veterinaria; 9 professors, 50 students.

Rio de Janeiro:

Faculdade de Medicina, Cirurgia e Pharmacia (1808); 45 professors; 1,850 students; annual expenditures, \$300,000.

Instituto Psychiatrico.

Escola Polytechnica (1810); 29 professors; 284 students.

Faculdade de Sciencias Juridicas e Sociales (1891); 16 professors; 290 students.¹

Escola Superior de Agricultura e Medicina (1911); 15 professors; 50 students.

Sao Paulo:

Escola Polytechnica de Sao Paulo (1894); 40 professors; 170 students.

Faculdade de Direito de Sao Paulo (1827); 28 professors; 550 students.¹

Escola de Pharmacia e Odontologia, etc. (1898); 12 professors; 240 students.¹

An analysis of the statistics of 11 of the universities tabulated shows that the faculties of law and medicine attract the largest proportion of students. In the universities referred to, the law faculties comprise 23.6 per cent of the total students and the medical faculties 42.3 per cent.

The titles given to the law faculties indicate their broad scope and dual functions. They are intended not only to prepare men for

¹ Information derived from Minerva.

professional practice, but also for the administration of public affairs. In every State applicants for admission to the legal faculties must have a diploma showing the completion of a secondary course of study, covering a period of six or seven years; or, if the period be shorter, additional preparation in the university faculty of letters. Hence the student of law comes to his professional studies with aptitudes developed under literary influences, and these are strengthened by the course of professional study. It is not surprising, therefore, that a large proportion of the men of letters in Latin America are graduates in law, the interests cultivated during the student period having been further stimulated by relation with the academies or societies of learned men which flourish in the university centers. The combination of legal, political, and sociological studies explains the large place which men of affairs hold in the literary annals of the South American States. A striking example is afforded by the former President of Chile, Don Pedro Montt, who is a graduate of the law course of the University of Santiago, and widely known as an authority on international law.

The scientific spirit of the modern era has penetrated the Latin-American universities by way of the faculties of medicine, many of which are well equipped with laboratories, have large hospital facilities, and draw to their service professors who have pursued their studies in Europe and are familiar with the modern developments of medical science. As one of the practical results of progress in this respect may be mentioned the admirable systems of school medical inspection in the principal cities of South America, and in the case of Uruguay its extension to the entire country.

The proportion of students in the scientific faculties, strictly so called, is small. The University of La Plata, which was established in 1905, is an exception in this respect, particular attention having been bestowed upon the faculty of science, which has been recruited in part from Europe, and numbers several men of special eminence.

The University of Havana has recently extended the scope of the scientific faculties without detriment to the humanities. Prof. Aristides Agramonte, who holds the chair of bacteriology and experimental pathology in this university, is well known in the United States as the discoverer jointly with Reed and Carroll of mosquito transmission of yellow fever.

Scientific activities are also promoted by the agency of institutes, museums, and observatories, which, if not directly adjuncts of the universities, are available for their students.

Astronomical science owes much to observations conducted at the observatories of Rio de Janeiro and Santiago de Chile; the ethnological museums, which form a marked feature of university equipment throughout the Latin-American States, are the outcome of

researches which have added greatly to the world's knowledge of primitive races.

The national university of Chile offers in its pedagogic institute an illustration of cosmopolitan influences which have borne an important part in shaping the work of many of the higher institutions of South America. The faculty of the pedagogic institute comprises at present 14 professors, all of whom have been chosen with regard to their success in combining research and authorship with their formal duties as instructors. It is interesting to note that the diplomas held by the members of this faculty represent the principal universities of Europe.

REGARD FOR PROFESSIONAL STANDARDS.

In connection with the tabulated data respecting the universities of Central and South America, attention may properly be called to the care taken by the various Governments to maintain the standards of professional education in their respective States. The following statements from recent official communications on the subject fairly illustrate the value placed upon foreign diplomas and the proofs of qualification required on the part of foreigners seeking to practice professions in all the States considered:

The Congress of Bolivia passed a law concerning licenses required for the practice of the medical and allied professions which was promulgated by President Montes, September 15, 1915. With regard to doctors from foreign countries which have not concluded conventions with Bolivia for the practice of the liberal professions, the law requires that they must pass an examination (art. 2 of the law of Nov. 21, 1907) and pay specified fees. Foreign applicants for licenses coming from countries which have conventions with Bolivia providing for the free exercise of the liberal professions are required to submit their diplomas, prove their personal identity, and pay specified sums into the national treasury.

The minister of justice and foreign affairs for the Province of Rio de Janeiro, Brazil, in reply to an inquiry on the subject of medical diplomas, states that the diplomas conferred by the faculties of the medical departments of universities of the United States do not confer the right to practice in the city of Rio de Janeiro without a previous examination to show that the individual holders of diplomas have fulfilled the regulations authorized by the latest decrees on that subject (bearing date Mar. 18, 1914) issued in the Province. Dentists desiring to practice in Chile must present their diplomas to the University of Chile, with application for examination, accompanied by a fee of \$70, according to a recent law published in the *Diario Oficial*. If the applicant presents a diploma from a university

recognized by the Chilean University, he will be given a practical and theoretical examination and issued a certificate if successful. If his diploma is from an unrecognized university, he must take a complete third-year course in the Chilean School of Dentistry and pay a fee of \$140.

By a law of 1914 the Congress of Colombia decreed as follows regarding medical diplomas for foreigners:

An individual having a diploma issued by a foreign faculty can not exercise the practice of medicine in Colombia without fulfilling the following requirements:

(1) He must present to the government of his department his diploma, properly legalized (certified) by a Colombian diplomatic or consular officer resident in the country where the diploma was issued.

(2) He must prove his identity, for which purpose the diploma should carry a photograph of the holder affixed and stamped with the seal of the legation or consulate where legalized.

(3) He must pass an examination in clinics during an hour in a hospital and before a council of four examiners named by the board of hygiene or by the medical faculties, where such exist.

All persons having diplomas issued in foreign countries and who may have practiced the medical profession in Colombia for more than a year before the adoption of this law shall present their diplomas to the governor of the respective department within 120 days, who will then concede the legal right to practice. After that period they will be subject to the dispositions of the present article, except in case of Colombians who are graduates of a well-known medical institution the solidity of whose teachings are recognized and whose diplomas carry the certificate of a consular or diplomatic officer of Colombia stationed abroad. These may exercise their profession freely, the same as graduates of Colombian medical schools.

The following provisions relative to the recognition in Ecuador of academic grades or degrees conferred by foreign institutions are comprised in the organic law of public instruction passed in 1912:

Examination certificates issued by foreign institutions shall have the same value as those of the national institutions, provided they are properly legalized.

Those who wish to select an academical title or degree shall present their certificates of the studies pursued before the respective faculty or the administrative council.

If the council finds that the corresponding courses have been sufficiently studied, the documents being authentic, the candidate shall be certified as competent, and he will then take the general examination.

The academic grades or degrees received in foreign institutions shall be recognized in Ecuador, after having taken the respective general examination before the authority competent to confer the corresponding degree.

The dispositions of the previous articles shall govern in all cases except where treaties have been made providing for the question of professional liberty.

After the degree which was obtained in the exterior has been recognized, the respective authority shall confer a corresponding one in conformity with the dispositions of this law.

CHAPTER XXXII.

EDUCATIONAL ACTIVITIES IN EUROPEAN COUNTRIES.

EFFECTS OF THE WAR.

INTRODUCTION.

Among the great disasters entailed by the European war must be counted the check to plans for developing public education. On the eve of the outbreak of the war such plans were uppermost in all the countries since involved in that struggle. Propositions had been submitted to their legislatures or were under advisement, and vigorous agitation was maintained in behalf of needed reforms in the schools, large extension of the provision for the instruction of the masses, and their better preparation for industrial life and civic duties. These efforts have ceased not only in the countries engaged in the struggle, but also in neighboring countries, which, although neutral, are threatened with unknown emergencies, and by reason of the increased costs of living and the disturbance of trade and industry are unable to apply their resources to works of internal development. At the same time, the usual sources of educational information are wanting. Official reports have not been published or their scope has been greatly restricted; many of the educational journals have suspended, and those that have continued deal almost exclusively with conditions growing out of the war. Consequently the present survey of education in Europe will be limited, in the main, to the different phases of the same subject.

With respect to many disturbances that the war has caused throughout the whole range of education, a general statement would apply alike to all the countries directly affected: Retrenchments, reduction and disorganization of the teaching force by the call of men to arms, temporary expedients to supply this loss by combining schools, substituting women, doubling the work of professors past the military age, deserted universities—these are features of the common record. They pertain, however, solely to the internal affairs of schools and higher institutions. At the same time the war makes heavy demands upon the teaching fraternity for services in behalf of children bereft of parental care, for soldiers in the field, the wounded in hospitals, and for the maimed and mutilated who must

be prepared for some forms of industrial activity through tedious and novel processes of training possible only to teachers skilled in the arts of stimulating and instructing. No reference is here made to efforts which teachers and students share with all other social groups, including time and money contributed through various organizations working for the national cause.

Apart from the effects of the war common to the different countries, it is obvious that each will present special conditions of great significance. This would necessarily be the case in Great Britain, whose activities have suddenly been turned in new directions, and in a country invaded as France has been. From the political organizations of these two nations it follows also that every measure proposed for present amelioration or future security becomes the subject of public discussion and report; hence the immediate effects of the war upon educational activities as well as in respect to opinions and purposes are prominent features of the current record, social and political.

The central powers of Europe show similar disturbances in the school conditions, but so far their bearing upon prevailing educational policies is less pronounced.

At this time no summary of the effects here referred to is possible, but their partial rehearsal is essential to the year's survey.

ENGLAND.

RETRENCHMENTS FORCED BY THE WAR.

At the opening of the British Parliament in 1914 the outline of a scheme for the development of a national system of education was presented to the House of Commons by the president of the board of education. The proposals included larger grants for technical and secondary education, for the training of teachers, and for other extensions, involving, according to the subsequent statement by the chancellor of the exchequer, an additional sum of £3,892,000, very nearly \$20,000,000, if they were to be carried into effect.

The latest report of the board (issued in 1916) states that progress in this matter, at least as regards financial aid, was arrested by the outbreak of the war. Meanwhile the plans of reform are not wholly abandoned, but, so far as circumstances permit, are under formal inquiry and preliminary consultations. The events of the war have deepened the conviction that the national system of education must be developed on the lines laid down.

The necessity for retrenchment in expenditure on all branches of the civil service was emphasized by the appointment in July, 1915, of a treasury committee on the subject. The final report of this committee, which was submitted in February, 1916, dwelt in par-

ticular upon the education services. The difficulty of economy in this direction was distinctly recognized in view of the prevalent feeling that such "economies are dangerous and may in the long run be unremunerative." The opinion was expressed by the committee, however, that no material loss of efficiency would result from postponing or reducing the capital expenditures on new buildings, equipments, etc., which under normal conditions amount to about £3,000,000 a year.

Further retrenchments, it was pointed out, could be made "without a loss of efficiency, by altering the present school ages so as to reduce the number of children in the schools," and for this purpose the committee advised that measures should be adopted "for excluding from school all children under 5 years of age, except in very poor town areas, and for withdrawing all grants in respect of such children, legislation being obtained for this purpose so far as is necessary." It was suggested further that the age for admission might be raised to 6 or 7 years, corresponding to the usual requirements on the Continent.

The local education authorities had already been subject to great pressure from various sources in regard to the exercise of economy in the matter of education, and the work of building was generally suspended before the committee on retrenchment reported.

The committee on retrenchment concluded that saving was possible in the administrative and inspection services. With regard to the former, they advised that the official forms which local authorities and teachers are obliged to fill out and return to the board of education should be simplified and their number reduced. The opinion was also expressed that there was unnecessary duplication in the inspection service by the appointment of specialists and as a consequence of the dual system of central and local inspectors.

EXCLUSION OF CHILDREN UNDER 5 YEARS OF AGE.

The exclusion from school of children under 5 years of age has been authorized in many places, but is strongly opposed for social reasons. The action of the London authorities in this matter was brought before the House of Commons by the member from North Somerset, who stated that when the matter was before the education committee of the metropolis, it was at once pointed out that there were a large number of children already excluded and that those who were in school could not be kept out in order to make room for others, nor their numbers restricted without great social difficulties and suffering. On this point he said:

A number of the mothers of these children go out to work, and they send their younger children to the infant school, very often in charge of the older

children who go to the upper standards, and unless they had these facilities these women would not be able to carry on their usual employment. At the present time the number of women working in this way taking advantage of the infant schools, and their elder children attending the school together, is largely increasing. I am told that in certain munition areas the number is very large indeed, and to begin at this time excluding those children from school is cruelty, bad policy from the point of view of making munitions, and bad policy from the point of view of the welfare of those young children.

Referring to a compromise order to the effect that children under 5 should only be excluded when the social circumstances made it advisable, the speaker declared that this had led to a sort of inquisition which had proved grievous to parents and which appeared "to be an infringement of the liberty and rights of the people." He expressed the hope that the board of education might be instructed to interfere and force local authorities to keep the schools open to children without regard to social circumstances. In reply to this suggestion it was pointed out by the Parliamentary secretary to the board that these were matters outside its competence and jurisdiction, as they had been left by the law entirely to the local authorities.

The importance of the example of London arises from the large proportion of the very young children that are in its schools. They are estimated to form one-eighth the total number for the Kingdom.

It may be noted here that in 1915 there were on the registers of the schools of England and Wales 283,366 children below 5 years of age. These, with the children between 5 and 6 years of age, made a total of 893,000. In other words, 14.6 per cent of the pupils enrolled in the elementary schools in that year, viz, 6,108,648, were below the age generally required for admission to the elementary schools of the Continent.

EXEMPTION OF CHILDREN OF SCHOOL AGE.

More serious than the exclusion of very young children from school is the demand for the exemption of children of school age to make up for the loss of labor. Every industry is represented in this requirement, the textile industry, commercial business, and above all, agriculture. As to the actual number of children released from school attendance in response to these demands, exact statements are wanting. It appears that up to January 31, 1915, according to statistics presented in Parliament, 1,400 children subject to school attendance were employed in agriculture. In May of the same year the number had increased to 3,800, and in July, 1916, to 15,750. In the Parliamentary debate on this subject Sir J. Yoxall, long identified with movements for the welfare of children, said:

There are two ways of exempting children from school for farm labor. There is the open and unblushing method adopted when returns have to be made to the board of education, and there is the indirect method, far more effective,

which consists in not prosecuting parents or employers who make use of child labor in an illicit way, and I am very much afraid that inquiries into the real circumstances will show that 15,000 is very much beneath the mark. * * *

I would like to see the president of the board empowered to say to a local education authority, if necessary: "Very well, if you yield to the popular clamor of the farmers in your locality and rob from those children what ought to be their birthright of, at any rate, a modicum of education from the age of 11 to the age of 13, we will fine you by withdrawing the whole grant or a large portion of it." There is the remedy. It is again money that lies at the bottom of the whole matter. The demand for these children is a money matter—a sordid motive—and a sordid motive requires sordid punishment.

The unwise policy of depending upon child labor in this crisis excited protests from individuals and organized associations throughout the Kingdom. The grounds of this opposition are set forth in a powerful appeal by one of the most determined champions of the rights of children in England, as follows:

The war is laying its hand heavily upon the youth of the nation. * * * The wrong to the youngest children may possibly be redeemed, if it does not continue too long. The problem of the few years of adolescence is more fateful and more urgent.

Even in peace time one of our few statesmen said that one of the most urgent national problems was how to check the evils by which "too many of our bright, clean, clever boys leaving school at 13 or 14 had become ignorant and worthless hooligans at 17 or 18."

Much has been done in recent years by patient, skilled endeavor to staunch this wound in the body politic; but now all is reversed and the hooligan harvest promises to be truly plenteous.

In view of the rapid increase in the demand for the work of boys and girls, the writer emphasizes the evils as follows:

Long hours and unsuitable conditions are crippling health; high wages and lack of supervision are disastrously affecting character; an abnormal fire of enthusiasm, patriotism, or mere commonplace excitement is consuming both the nervous and moral fiber. The boy and girl of the industrial classes are often at the top of their power during the years of adolescence; at piecework wages they can earn more than their elders as nimbly as the smart newspaper boy runs his elderly rival off the streets. But it is not a few short months or years that are thus used up, it is their lives.

All the great education societies and many other associations joined in the protest against the reduction of the school life of the children. It was the chief subject of consideration in the meeting for the current year of the National Teachers' Union; the National Education Association, which is of more comprehensive character, devoted the annual conference to the same matter; the Association of Education Committees, representing all the local authorities in England, took firm stand against the reduction of the school life of the young; and the smaller, although not less influential associations, joined in the protest. The spirit which animated all these bodies was voiced by

the president of the National Association of Head Teachers. In an address before the annual meeting held at Nottingham June 22-23, which aroused great enthusiasm, he said:

By voluntary enlistment we have raised fighting forces of some 5,000,000 men. The nation in countless forms has expressed its pride in this magnificent achievement; it is the outward manifestation of a living patriotism which received its early stimulus within the four walls of our schools. Men, and women too, of every shade of thought and of every grade of society have written of the sterling qualities and admirable characteristics of our citizen soldiers. Their unflinching courage, their instinctive discipline, their patient endurance, their unfailing cheerfulness, their self-respect, and, above all, their humanity and their underlying religious feeling—these are the qualities which confer distinction upon our soldiers of to-day; these are the qualities which have so well merited the statement that our army is, in essentials, an army of gentlemen. The bulk of this army, and their fathers and mothers before them, passed through our primary schools. Under present conditions, teachers are fully alive to the duty which confronts them. They are determined, so far as it may lie within their power, that no child shall suffer permanent handicap in the race of life through the temporary dislocation of the education service. The schools must make sacrifices in common with every public service, both national and local, to meet the urgent needs of the country; but this obligation must not include essentials. School prizes may for the time be withheld, but the prizes of life must be safeguarded. Therein lies the explanation of the attitude teachers have assumed toward war economies in education. * * * We may safely conclude that the paramount right of the child, under all circumstances, to be educated in an efficient school is so firmly embedded in the conscience of the nation that it has even withstood the shock and strain of war. Our duty remains to widen the narrow conception of education which still exists.

At a conference of the Workers' Educational Association held in May of the current year the following resolution was unanimously carried:

That this conference, having regard to the interests of children, strongly protests against the recommendations of the committee for the retrenchment in the public expenditure concerning (a) the exclusion from school of all children under 5 years of age, and (b) the raising of the minimum age of compulsion from 5 to 6 years of age. Further, we view with alarm the suggested amalgamation of the health services of the board of education with the local government board and the transference to the labor exchange department of the responsibility for juvenile committees. Such proposals are not, in the opinion of this conference, conducive to educational or administrative efficiency.

That this conference strongly recommends all bodies represented to associate themselves with the Workers' Educational Association, and in order to create an enlightened public opinion on educational problems urges upon the association the need of the organization of local conferences of all bodies and individuals interested in education.

Early in 1915 the board of education issued a circular urging the local authorities to use the utmost care in excusing children from school attendance for agricultural purposes. In view of the increase in the number of exemptions, a second circular dealing with the

subject was issued in February, 1916. This circular stated emphatically that—

Children under 12 years of age should never be excused unless the circumstances are entirely exceptional and then only for very short periods.

Persons desiring to employ in agriculture children liable to attend school should be asked to furnish particulars of the character of the employment contemplated, the wages offered, and the period for which the labor is required. They should also be required to satisfy the authority that they have made adequate efforts, supported by the offer of reasonable wages, to secure the labor required in other directions, and more particularly by employing women.

It was further suggested that the urgency of the need for the labor of school children might be tested by the amount of wages offered, and the general rule was laid down that if the labor of a boy of school age was not worth at least 6 shillings a week to the farmer the employment would not compensate for the loss entailed by the interruption of the boy's schooling. The importance of strict control over this matter was urged upon the attention of the local authorities.

In all the discussions of the withdrawal of school children under the plea of pressing necessity there was manifested the determination to limit this action by every safeguard possible, and at the same time to excite an overwhelming public sentiment in support of measures for increasing the period and the efficiency of school training upon the close of the war. As an immediate result of the opposition to the policy that was depriving thousands of young people between the ages of 12 and 14 of preparation for the conditions of normal industry, a departmental committee was appointed to consider the future of the boys and girls now engaged in munition and other work after that work shall be finished.

INCREASE IN JUVENILE OFFENSES.

Inquiries addressed to the police of 17 of the largest towns of England brought out the fact that comparing three months, December, 1914, to February, 1915, with the corresponding months, December, 1915, to February, 1916, the total number of children and young persons charged with punishable offenses had grown from 2,686 to 3,596, or very nearly an increase of 1,000 for the 17 towns to which everyone contributed. This increase was attributed to the absence of parents and the weakening of parental control consequent upon the war, and to the fact that the work of boys' clubs, which have been helpful in curbing the wild impulses of youth, had been crippled by the withdrawal of men of character who usually give time to these clubs, but who are now serving with the forces or engaged in munition work.

A circular addressed by the Home Office to the clerks of justices, calling their attention to these evils, adds to the above causes that of the effect of the indiscriminate display of moving pictures. On this subject the circular says:

Many chief constables of large towns, and other persons interested in the welfare of the young, have represented that children are led to commit offenses by witnessing cinematograph films depicting crimes, the use of firearms, etc.; and that children often steal money in order to obtain admission to cinemas.

It was announced that the secretary of state had under consideration the whole question of the censorship of films, but the opinion was expressed that, where the local justices are the licensing authorities under the cinematograph act of 1909, special attention should be given to the nature of the films which it is proposed to show at children's performances. The education committees of many cities have been aroused by the reports of increase in crime, the causes of which it is agreed are substantially those recognized in the circular cited above. The education committee of Bristol, by a unanimous vote, adopted the following resolution:

That the Bristol education committee has had under consideration the effect which the frequent attendance of children at cinematograph exhibitions has upon the moral and physical health of such children. The members have had evidence before them of the injurious results which sometimes follow from such attendances, and they desire to urge upon the Government the necessity for careful investigation and further legislation; they also request that the chairman bring the matter before the association of education committees.

Commenting upon this action, the School Government Chronicle says:

For the courage and initiative of the member who raised the problem of the cinema show with reference to the welfare of children at the last meeting of the Bristol education committee there will surely be a widespread movement of responsive gratitude.

This journal urges "that this wonderful invention of the living picture should be taken vigorously in hand by agencies competent to put it to worthier uses than those to which it is largely turned as a subject of self-seeking business exploitation."

MILITARY OCCUPATION OF SCHOOLS.

At the request of the army council, measures were taken by the board of education early in 1915 to provide for the occupation of schoolhouses for military purposes, and as a result of this action a total of 1,023 public elementary schools in England and Wales had been thus appropriated up to the end of August, 1915. The buildings were required for hospital purposes, for the billeting of troops engaged in garrison duty, and in several areas for the accommodation

of the great influx of munition workers where the ordinary housing accommodation of the district proved insufficient for the purpose. In many cases prolonged occupation resulted, but in general interruption of the schools was for short periods only, as appears from the fact that on the 31st of August, 1915, only 169 schools were in the possession of the military, of which number 92 were used as hospitals. Altogether the number of children displaced was 109,335, but temporary provision was made for their accommodation with very few exceptions. The official report gives the following particulars respecting the arrangements made in three large urban areas which were seriously affected by the changes:

In the first of these areas the buildings of the whole or part of 13 public elementary schools were taken by the military, and children representing an average attendance of 11,200 (more than half the total average attendance of the borough) were displaced. For the children of a few of the occupied schools, other buildings, such as mission halls and Sunday schools, were secured, and it was possible to continue the education of these children full-time; but for the majority of the children other arrangements had to be made, and a "double shift" system was adopted.

Under this system the children of School A (not occupied by the military) met for their morning session from 8.30 to 10.35 and for their afternoon session from 12.50 to 2.55; while the children of School B (occupied by the military) met under their own teachers at School A from 10.40 to 12.45 and from 3 to 5.05. Thus the buildings of School A did double duty.

In the second area the problem to be faced was of equal magnitude. Seven large schools, with an average attendance of 9,000 out of a total average attendance for the whole borough of 26,000, were taken for the use of troops. Substantially the same "double-shift" system as that described above was adopted, except that the infants attended school once a day only for a session of three hours; this arrangement was made in order to avoid an unusually long walk four times a day for the young children.

In the third area a half-time or single-shift system, with one meeting a day only, was adopted. This plan allows of each meeting being longer than the ordinary meeting of a school. In March, 1915, the military were occupying schools which usually accommodate about 17,000 children out of a total average attendance in the area of about 41,000. In the case of one only of these schools, with an average attendance of about 270, was it found impossible to make immediate arrangements for the teaching of the children. In some cases temporary premises were found; but in most of the schools arrangements were made whereby the children of one school met in the morning only and those of another school in the afternoon only.

The half-time system has had some interesting results which are brought out in the official report. It is noted that in one area it has resulted in the organization of home work under the direction of the school-teachers, and in this way several schools have been more than compensated for the loss of the half day's instruction. The system has also had the effect of concentrating the efforts of teachers and scholars on essential matters which give promise of some lasting

improvements in the school programs. In many places the half day out of school has been used with good results for—

games, physical exercises, swimming, open-air work, excursions, visits to museums and galleries, needlework parties, and the like. In a large town where both open-air expeditions and visits to galleries have been particularly well organized the inspector mentions that one head master in a school favorably situated is so convinced of the advantage of open-air work that he would not object to continuing the half-time plan when the war is over. The effect on the health of the children has also been good. A head mistress reports that her girls have noticeably improved in endurance in walking. The only complaints came from parents in poorer districts at the increased wear and tear of children's boot and clothes and the trouble involved in looking after the younger children when kept at home on wet days.

REFUGEE CHILDREN.

The loss of school buildings and of teachers has been aggravated by the necessity of providing for Belgian refugee children, of whom not less than 30,000 have found asylum in England. The children have been taken into the schools without special difficulty, and in some cases the local authorities have issued circulars in French and Flemish notifying the Belgian parents to send their children to school. As a rule, preference is shown for schools of the Roman Catholic denomination, but in a few cases separate schools or departments have been provided for the refugees. Where only a few such children have been admitted to school, they have been taught together with the other children by an English teacher, but where there were enough to form a class by themselves, a Belgian teacher, herself a refugee, has often been employed.

In the case of a few Belgian children in a large school, both teachers and pupils help in the instruction, as illustrated by the following incidents:

At a certain school there was one Belgian boy at first. He was placed with a teacher who spoke French, and who taught him in that language. No definite attempt was made to teach him English, but when he began picking up words and phrases the other boys entered keenly into the task of teaching him all they could. In less than three months it was possible to teach him in English; indeed, he became so proficient that he referred to the handicraft instructor as the "professor of carpentry." A second Belgian boy was then admitted, who spoke only Flemish. The staff were helpless, and for a fortnight the Flemish boy merely looked at pictures in all the schoolbooks and helped to distribute and collect materials. But then there arrived another Belgian, who could speak both French and Flemish. The last comer must clearly be taught English at all speed, and then he can teach the little Fleming. The latter had enjoyed his picture books so much that he confided to his instructor that "he did not want to learn English, for then he would have to work." However, it is satisfactory to know that all three could understand and use English before they were withdrawn from the school.

CALL FOR MEN.

The first year of the war was marked by a depletion of the teaching staffs of schools and of both the teaching and student bodies of higher institutions, caused by the call of men for military and naval service. This depletion increases as the war continues. According to the report of the board of education issued in 1916, it was estimated that by October 15, 1915, not less than 20,000 teachers employed by the local education authorities alone had joined the colors, 5,000 full-time students in university institutions aided by the board, and 3,000 training-college students. The official staff of the board had lost 557 members from the same cause and, as a consequence of these losses, the whole education service was engaged in adapting its methods and arrangements to changing conditions.

While deploring the injury suffered by the service from these losses, the opinion was expressed by the board that the repute and status of the profession had been raised by its ready and cheerful response to the nation's call; thus the cause of education itself had been strengthened.

The withdrawal of men from the ordinary pursuits of life to serve in the army weakens all the restraining influences of society. This effect has been referred to in connection with the increase in the number of youthful offenders against the law. An evil scarcely less serious results from the loss of men most competent to serve the civic interests of the State, foster science, and direct enterprises requiring technical knowledge. This latter aspect of the matter is emphasized by a circular (952) issued by the board of education to the local education authorities in response to a very wide and insistent demand that measures be taken for preserving to their educational duties and interests certain classes of teachers, students, and officers. The circular promises—

sympathetic consideration, by the army council, of applications, if indorsed by the board of education, for postponement of the active service of a strictly limited number of research or postgraduate students of science or technology or undergraduates or full-time students and bona fide candidates for admission, who are certified as likely to attain a high standard of merit equal to first or second class honors.

This action is taken "on grounds of public interest" connected indirectly at least with the war services, or with the industrial reactions of the war.

SECONDARY SCHOOLS.

In the preceding statements reference has been made almost exclusively to the effect of war upon the elementary schools, the schools in which 90 per cent of the children of the nation receive their entire

education, and which are supported by public funds and under the control of public authorities. The disturbing conditions are felt equally in the secondary schools; indeed the internal work of this class of institutions has been more seriously affected by the war than that of the elementary schools. In the secondary schools exclusively for boys the reduction of the teaching force has been proportionately greater, which is natural since it consists almost entirely of men. The highest grade secondary schools have suffered also great loss of students on account of the large proportion of the boys of military age who have joined the army.

To some extent the places of the masters who have joined the army have been filled by women; more generally, however, the schools for boys are working with reduced staff; in the coeducation schools of this grade the proportion of women teachers has noticeably increased; a few Belgian refugees of suitable qualifications have been appointed to fill the vacant posts.

Secondary schools equipped with workshops have given great help in munitions work. For instance, during the summer vacation of 1915 workshops in three of the municipal secondary schools of Leeds were in daily use by the staff and older pupils for the manufacture of dummy cartridges to be used in the training of troops. Afterwards the work was continued by the boys of the various secondary schools in the district, and reinforced by Saturday squads of teachers. Work on shells is also carried on by the same organization. This is not an isolated case.

The usual routine of the schools has also been interrupted to give time for drilling cadet corps and junior officers' training corps, which have been organized in practically all the secondary schools for boys, public and private.

On account of the independent organization of the secondary schools of England, no exact estimate can be given at the present time of the extent or the varied forms in which the effects of war have been manifested. The number of secondary schools which are borne on the Government list and which were in military occupation in July, 1915, is reported as follows:

Secondary schools in military occupation.

Purpose.	Number of schools.	Number of students.
Military hospitals:		
Permanent.....	22	7,280
Temporary.....	4	
Occupied by troops:		
Permanent.....	11	1,544
Temporary.....	51	

In all these cases emergency arrangements were made for continuing the school work in temporary premises.

Attention has already been called to the loss of students in higher institutions receiving Government grants. In this category are included the technical, art, and evening schools which have been the special subject of Government aid and direction. The proportion of men students in these institutions who have enlisted or have been called off by other services arising from the war is very great. At the same time the number of women students in many areas has increased, particularly those desiring instruction in subjects and in practical work relating to the war, such, for instance, as ambulance service. The technical schools have been called upon for large service in helping to meet the demand for munitions of war. Many of the technical schools are engaged in actual munitions work, including the testing of materials, the making of gauges, aeroplane parts, and other engineering details. On account, also, of the great demand for munition workers, experimental courses for training unskilled persons have been established in many of the technical schools, while others whose equipment was insufficient for training classes have transferred their machines to munition works.

On account of the rapidly increasing demand for assistance, the ministry of munitions arranged with the board of education of England, the Scotch education department, and the labor exchanges for a large extension of the provisions for training munition workers in technical schools and for close cooperation with munition firms and labor exchanges with a view to placing the trained workers in employment. A large proportion of the persons trained in these experimental classes were at once employed in factories. The report from South Wales states that all the students in the temporary classes—

are women of good type (mostly ex-secondary school or university college), now chosen by the woman inspector of the labor exchange. They have no previous experience. * * * All students who prove satisfactory (and physically able to stand the work) will be immediately absorbed in the factory to which the class is closely allied.

The evening schools, included among the special agencies receiving grants from the Government, have been largely devoted to classes for men serving with the colors. It is noted that the instruction falls under one or the other of two types, the first consisting of instruction in subjects which are likely to be of practical use to the soldiers, such as French, German, map reading, telegraphy, or field cooking; the second including more recreative work, singing, popular lectures, etc. The most common subject of instruction in these classes has been French.

AWAKENED INTEREST IN NATIONAL EDUCATION.

The outstanding fact in the year's record is the awakened consciousness of England in regard to national education and its relation to national industry. The first action of Government in this direction was the creation July, 1915, of a new department of scientific and industrial research. This department was the outcome of the proposition for an advisory council on industrial research which was presented to the House of Commons by Mr. Pease just before his resignation from the presidency of the board of education. The measure was expanded in the House and, as finally adopted, provides for a committee of council that will be directly "responsible for the expenditure of any new moneys provided by Parliament for scientific and industrial research." In carrying out this purpose the committee will have the assistance of a small advisory committee. The titular head of the new department is the lord president of the council, but its active chief is the vice president, and this place is filled by the president of the board of education, who answers for the committee in the House of Commons. The other ministers associated with the chiefs in the constitution of the committee are the chancellor of the exchequer, the secretary for Scotland, the president of the board of trade, and the chief secretary for Ireland, though other ministers may at any time be added. Nonministerial members may also be added, in which capacity three well-known leaders, namely, Lord Haldane, Mr. Arthur Acland, at one time chief of the education department, and Mr. Pease, the recent chief, are already included.

The most important distinction between the advisory council proposed by Mr. Pease and the committee of the privy council is the fact that the province of the latter extends to the entire Empire. The official regulation sets forth that:

It is clearly desirable that the scheme should operate over the Kingdom as a whole with as little regard as possible to the Tweed and the Irish Channel. The research done should be for the Kingdom as a whole, and there should be complete liberty to utilize the most effective institutions and investigators available, irrespective of their location in England, Wales, Scotland, or Ireland. There must therefore be a single fund for the assistance of research, under a single responsible body.

The small advisory council is responsible to the department or committee of council and is composed mainly of eminent scientific men and men actually engaged in industries dependent upon scientific research. For the immediate use of the committee an appropriation of £30,000 was made.

While these measures were developing, constant pressure was exerted upon the Government for a reform of the educational sys-

tem. The conviction spread that the work must be broadened, deepened, and unified, and while it was everywhere recognized that its main dependence must be the vigorous action of local authorities, nevertheless the demand was insistent that the Central Government should exercise larger power for insuring the cooperation of local authorities in respect to measures for increasing the educational provision of the country. In response to this irresistible demand several committees were formed and each assigned to a special field of investigation. The first of these committees, appointed to inquire into the education of young persons after the war, has already been mentioned; the second committee was formed to inquire into the teaching of science, especially in universities and secondary schools, and the application of science to industry; to the third committee was committed an inquiry on modern languages. The committees pertain, it will be seen, to three conditions that have been thrust into prominence by the changed relations of internal and international affairs consequent upon the war.

The new department at once made direct appeal to the universities and technical institutions, as well as to existing scientific and professional societies and institutions by which "research is or can be efficiently conducted." This effort met with hearty response from all quarters, as illustrated by the action of the chemical society which, before the department was formed, had constituted itself "a consultative body which should meet at frequent intervals to consider, organize, and utilize for the benefit of the country all suggestions, inventions, and offers of assistance it might receive." The president of this society addressed a circular letter to all members, urging them to every exertion in their power for making the scheme a success.

Because of the national bearings of science and scientific teaching the special committee on this subject comprises in its membership—

the names of scientific men in whom the country would have confidence; also names of some of those who appreciate the application of science to commerce and industry, and of course including those who are able from general experience to correlate scientific teaching with education as a whole.

Among proofs that educational reform is imminent is the reference of the subject to the "prime minister's reconstruction committee." This committee will serve as an ultimate clearing house to which will be referred for final decision changes that may be advised by bodies of experts that have been formed in all departments of public affairs. The advice of these bodies, including the special committees on education, will thus be coordinated in the final plans of reconstruction.

The new spirit evoked by the war is shown by the debate in the House of Lords on the training of the nation and the necessity of

preparing for the future. The subject was proposed by Viscount Haldane, who, in the speech opening the first session devoted to the subject, pointed out certain marked defects in English education as contrasted with that of other countries. In this connection he said:

It is sufficient for me to take the case of two neutral nations, one a small one, the other a very large one—Switzerland and America. Switzerland puts us to shame in respect of her national system of education and in the training which she gives to the mind of the young, particularly of those who are engaged in the great industries, and there is a keenness and an activity at this moment everywhere present in the United States which shows the sort of rivalry we shall have to meet if we are to preserve our great industrial and commercial position. Our problem, therefore, is to make education, which is a tiresome word to most people in this country, interesting by showing its concrete nature and by showing what it means, not only theoretically but practically. It means not mere examinations, not the mere putting of science into the test to which people who are aspiring as candidates for office are subjected. It means something far more than that. It means the training of the mind in the widest and most comprehensive sense, so that the youth of the country may be able when the time comes to turn, it may be to science, it may be to the humanities, it may be to any of the thousand and one subjects which are covered by the field of knowledge in this twentieth century.

Lord Haldane noted as an “appalling reflection” that in England 90 per cent of the young persons—that is, 9 out of 10—get no further education after the age of 14.

Our greatest mistake in this country has been in concentrating upon the education and training of the well-to-do. We do not recognize that a bifurcation takes place about the age of 13. At that time compulsory elementary education ceases, and for the child of the workman what provision is there unless he has a very exceptional and keen father? Why, none whatever. Whereas it is the custom and invariable practice among the middle and upper classes to send their sons and daughters to schools where they will get further training, in the case of the working classes there is no such provision, with the result, as I say, that 90 per cent of our population have not that education which is required if we are to make the best use of our available talent.

This neglect was contrasted with “the system which has been set up in Germany especially for the purpose of providing the army of trained workmen who may overcome us in the neutral markets which we have dominated to so large an extent in the past.”

At the close of his speech Lord Haldane impressively warned his hearers that:

The old order is passing away, and we are face to face with a new order. Our old methods will not avail us any longer. That is why one hopes that the Government will take the lead in preparing the nation for the struggle which lies before us as soon as this war is over—a struggle not less deadly and not less terrible, because, as I have said, it will not be obvious and it will be slow.

The debate thus opened by a critical but stimulating address was continued during two subsequent sessions by men of commanding influence in English affairs who dwelt particularly upon the evidences

of efficiency in English education, although acknowledging that the system does not provide adequately for the great body of young people between the ages of 13 and 18. At the same time it was urged that great development has taken place even in this respect during the past decade. This more favorable aspect was emphasized by Mr. Bryce, whose intimate familiarity with all the conditions gives great weight to his words. Mr. Bryce declared that the greatest obstacle to be overcome is the mental attitude of the business men of England and the indifference to education on the part both of boys and their parents. In regard to the former he said:

I am quite sure, from the observations I have been able to make of the heads of the business community, that the fault lies very largely with them. The truth is that our business men have not, like the business men of America and of Germany, yet come to believe in science; they do not know what services science can render; they do not understand that a scientific discovery may have the most important effect on their business in enabling them to increase their output and their profits and far more than repay any sum that they might spend in getting the best scientific opinion to help and direct them. The Americans and the Germans have learned that, and both practice it with extraordinary success; but our people have not learned it yet. I am glad to say that there are signs of improvement. I believe that the advisory committee which has now been formed by the Government, and on which they have some very eminent scientific men, is already beginning to find that the large employers of labor, the heads of large industrial concerns, are responding and beginning to understand how much they can learn by endeavoring to obtain scientific guidance in their work. * * *

I believe there are only two ways in which we can deal with the problem; at least I can not think of any others. One is to make the employer of labor realize how much it is to his interest to get the most intelligent, most educated, as well as the most active boy; and to make the teaching so much better and so much more stimulating that it will awaken those intellectual faculties in the boy which are so often at present deficient.

In concluding the debate, Lord Haldane expressed gratification that as regards the wide meaning of education there had been general agreement and that the debate had been "of use in bringing to the mind of the public subjects in which the Government are desirous they should be interested, and with which the Government themselves wish to deal in a practical fashion."

THE OUTLOOK.

In this widespread agitation one question rises above all others. Will the nation bear the cost of the reforms demanded? The importance of this question gives special interest to the budget estimates for the coming year as presented by the president of the board of education. It is noticeable that while fully recognizing the enormous burdens already resting upon the nation, Mr. Henderson took a hopeful view of the financial outlook for education. The estimated expenditure of the board of education, which he submitted,

amounts for the year 1916-17 to £15,186,732 (\$73,807,517.52). This is a decrease of nearly £300,000 below the amount of last year's estimates, but it is not less than the actual expenditure for the past year and exceeds the expenditure for several successive years as appears from the following statement:

1911-12	-----	£14, 302, 859
1912-13	-----	14, 332, 018
1913-14	-----	14, 368, 794
1914-15	-----	15, 096, 235
1915-16	-----	15, 174, 300
1916-17 (estimate)	-----	15, 186, 732

Mr. Henderson noted that:

The first year of the war, 1914-15, saw our expenditure on education greater than in the previous year. In the second year of the war this level was maintained, and in the third, as the figures show, we expect to do likewise.

Of the total amount required for 1916-17, the greater part, £12,640,528 (\$61,432,966.08) would be credited to elementary education. But the appropriation to the central board provides less than one-half the total cost of the elementary schools, the remainder being met from local sources. Hence for the elementary education alone at least \$125,000,000 would be required to maintain the work at its present level. An addition of \$15,000,000 would be needed to carry out reforms that were planned before the conflict. Already this estimate has been increased by the recommendations of special committees that have been appointed to work out plans for the proposed reconstruction of the system of education. Thus the interim committee on scholarships recommends the increase of existing scholarship funds, national and local, by at least one and two-thirds million dollars. Although a single item in the large plans for reform, it is important, since in the English system of education scholarships afford the only means of opening up the province of higher education to students of limited resources.

The unanimous opinion as to the needed reforms is remarkable, but the vital factor in their accomplishment is money. As expressed by Mr. Henderson in his budget address, "What is wanted is money, and more money." It is confidently predicted that this demand will be met. In a pointed review of the situation the Times declares:

If the year passes without the publication of a clear-cut scheme of reform, a storm of indignation will arise through the country. * * * The Government has to deal not only with a stubborn, but with a very powerful reform party, which is determined to release the nation from its educational disabilities. * * * We shall see leading local education authorities on their own initiative, under the ample powers contained in the education act of 1902, putting these schemes of practical reform into operation. These education authorities have great power. By a few strokes of the pen they can * * * substitute for the present system such a new grading as will carry school life out

of the upas shadow of the act of 1870. They can do more than this; they can so organize opinion among the great manufacturers as to make continuation schools an integral part of every factory and every workshop. A great voluntary movement of this type is at hand. The manufacturers of England have learned at last that intelligent service will be the only service which will serve their purpose in the great days that lie beyond the war.

The change in the executive head of the board of education when the coalition government was formed was a significant event growing directly out of the war. The post was given to Hon. Arthur Henderson, the recognized leader of the labor party in England and for some time its representative in Parliament; hence his appointment as chief officer of education, his firm stand for reform measures, and his confident call for liberal appropriations, were taken as a pledge of the purposes of the Government on the one side and of the support of his party for those purposes on the other. This view is strengthened by the passage of the fee grant bill August 2, which extends the upper age limit for the payment of the grant above 15 years of age, a measure distinctly in the interests of the children of the laboring masses.

Mr. Henderson's resignation as minister of education, as soon as the new policies were clearly defined, had been anticipated, since the interests of labor demanded all his energies in this crisis. His successor is the Marquis of Crewe, whose identification with the cause of scientific and technical education gives assurance that this interest will be supreme in the measures upon which the Government is already engaged, and in which, to quote an expressive utterance, "commerce, industry, and education have ranged themselves with science to fight inactivity and inefficiency."

SCOTLAND.

The effects of the war upon the schools of Scotland have been similar to those in England, but on a smaller scale, except as regards the loss of men teachers, which has been proportionally as great. During the first months of the war the work on school buildings proceeded as usual, but in March, 1915, a circular was issued by the Government, stating that on account of the need of labor and capital for use in the directions in which they should best further the national interests, it would be necessary to avoid undertaking any new building operations except those of pressing necessity either for reasons of public health or on account of war requirements. Soon after, the education department was notified that the approval of the treasury in respect to proposals for loans for building purposes would be strictly restricted to cases of extreme necessity.

Regarding the exemption of children of school age on account of the scarcity of labor, the education department expressed the opin-

ion that the school boards might be trusted to deal wisely and carefully with the problem. On account of the strong public opinion in Scotland in support of extended education for the young, little apprehension was felt that the temporary interruptions would result in any lasting evils.

Those special features of the Scottish system, by means of which it gave promise of solving pressing problems pertaining to the continued education of the masses of children, have been seriously affected by the war. The attendance upon the continuation classes has noticeably declined, and the training centers established to increase the provision of teachers have suffered from the interruption of building schemes, and more seriously from the almost entire disappearance of the male students. The medical inspection of schools and medical treatment for needy children have also received a check by the depletion of the medical staffs. The loss of men teachers affects the secondary schools even more than the elementary. At the same time the usual routine of schools of this order has been interrupted to give time for drilling cadet corps, and in various ways, especially by the use of the laboratories and workshops, promoting the military interests. The devotion of the teachers to the national cause is indicated by their large contribution to the fund for war relief, amounting in August, 1916, to nearly \$180,000.

It will be recalled that the committees appointed by the Government to consider the question of educational reform included Scotland in their investigations, but there is a strong feeling that Scottish education should have a special and separate committee. This course is urged on account of the distinctions between the Scotch and English systems and the consequent problems peculiar to Scotland which are in danger of being overlooked in the preliminary investigation and final recommendations of the several committees. Satisfaction is expressed that the chairman of the advisory council on science and industry represents Scotland. The choice for this post fell upon Sir William McCormick, secretary of the Carnegie Trust for the universities of Scotland. By reason of his relation to the universities, he will be able to give effect to the recommendations of this council that relate particularly to the northern division of the Kingdom. The first report of this body, which has just been issued, recommends the cooperation of all the agencies engaged in technical and scientific education and in industries that depend upon trained workers. This recommendation accords with efforts that have been made in Scotland to bring about such coordinations.

THE UNIVERSITIES OF GREAT BRITAIN AND IRELAND.

The report of the universities of Great Britain and Ireland for the past two years is chiefly a record of losses. The majority of the men

students and a large proportion of the professors of the British universities are with the forces or engaged in other branches of the war service, and the financial resources have been proportionately diminished. It was estimated in October, 1915, that 5,000 full-time students in university institutions aided by the board of education had joined the army. Since that time the number has greatly increased. The loss has been partly made up by women students, who in larger numbers than ever are seeking university opportunities.

The report for Cambridge and Oxford, which are not included in the former estimate, shows that at least 80 per cent of the undergraduates had joined the army; the remainder consists almost entirely of students from India and the Orient and those physically unfit for service. Oxford University started its second year of the war with between 500 and 600 undergraduates, of whom 250 were freshmen. Of the entire number, about 150 were members of the officers' training corps. Most of these, being too young to take a commission immediately, are combining military training and academic study for a term before they apply for a commission.

As regards instruction, it was reported that in many of the schools there were not enough tutors to do the little work that remained.

One Cambridge college which had 114 residents in 1913 had in all 9 in March, 1916. Trinity, the largest college in any English university, fell from 743 to 71. An advanced class in science at Cambridge, in charge of a well-known professor, fell from about 20 in 1913 to 3—a girl, a Chinaman, and a Hindoo—in 1915, and 1 only of the 3 remained in 1916. The chief men students that are physically fit for the war comprise at Oxford the Rhodes scholars and at Cambridge a number of senior men in the great medical school who are rapidly getting ready for the service. Over 11,000 Cambridge men in all were serving in the forces in 1916. Everything has been done by Cambridge University to prevent those who have entered the service from losing all benefits from their university relations. The measures for this purpose include as many as four terms for absence, counting the time spent in active service as the equivalent of the special examination in military subjects. Through these concessions more than 100 degrees were conferred by proxy on men at the front in the early part of 1916. Besides the students, dons and tutors of the university have offered their services freely in the war or in some form of Government work, and, owing to the financial losses of the university, many dons have for the time accepted positions as schoolmasters.

The celebrated scientific school at Cambridge has been placed at the service of the Government, and notable instances are reported of valuable results of researches that have been carried on in this insti-

tution which have served to relieve the horrors of war. Among these are means of relieving the effects of the poisonous gases, supply of four-fifths of one of the most vital munitions of war, to say nothing of several inventions which are of use to the wounded. Cambridge and Oxford have both maintained great hospitals for wounded soldiers, and have also welcomed academic students and professors exiled from Belgium.

From the annual report of University College, University of London, it appears that the revenue from fees declined in the session 1914-15 by £24,000, as compared with the receipts for the previous session. The number of students fell from 2,206 to 1,416, the latter including 123 refugee students. It has been found necessary to encourage cooperation between the London colleges affiliated to the university on account of the depletion of staffs and classes.

The reports from the Scotch universities are similar in character. Edinburgh lost 55 per cent of men students in the second year of the war, and the losses continue. As in England, the number of women students increases, and there is a record attendance at the Women's Medical School.

Out of 1,800 members of the officers' training corps, Glasgow University, 1,121 have received commissions and 160 have enlisted as privates. The two smaller universities, St. Andrews and Aberdeen, show equal reductions in the student body.

The activity of the universities of Ireland in the national cause is illustrated by the following statements:

The senate of Dublin University met September 24, 1915, to confer degrees on candidates who had passed the special final examinations held for those volunteering for active service with the royal army. In an address delivered on that occasion the vice chancellor, Mr. Justice Madden, said:

The Trinity Medical School has sent 650 men, past and present students, to the navy, the R. A. M. C., the military hospitals, and the fighting units. Of these, 24 have fallen, 26 have been wounded, and 10 taken prisoners; 28 have been mentioned in dispatches, 5 have received the Military Cross, 3 the Companionship of the Bath, 3 the Distinguished Service Order, 2 the Order of St. Michael and St. George, and 1 the Cross of the Legion of Honor.

The vice chancellor also dwelt at some length on the researches of Sir Almroth Wright, a former student and a graduate of Trinity College, Dublin, and referred further to the work done by the women students' voluntary aid detachment, who have received 61 wounded soldiers in their hospital up to the present. The total number of Trinity College men who have joined the colors since the outbreak of the war is 970, of whom 74 have fallen.

Belfast University, up to May, 1915, had issued two lists, of which the first alone contained over 200 names of men commissioned in the

army, in addition to a large number of medical graduates attached to hospitals at home. The university has also held schools for officers conducted, as in Trinity College, by the staff of the officers' training corps, which is largely drawn from the teaching staff of the university. The National University does not possess, in any of its three constituents, University College, Dublin, Cork, or Galway, an officers' training corps. Nevertheless, Cork alone has recorded above 200 past or present students now serving in the army. The Royal College of Surgeons in Dublin has a large contingent with the forces.

DEGREE IN EDUCATION.

Among many indications of the increased importance that education has assumed in the scheme of national affairs should be mentioned the final sanction given by the King to the ordinance for the degree of bachelor of education to be conferred by Edinburgh University. The ordinance had already been approved by the university authorities and therefore came into force at the beginning of the academic year 1916-17.

Following this action on the part of Edinburgh University is the announcement of the adoption of a report of a committee of the Aberdeen University council on the proposal to give a degree or honors in education.

At a meeting of the Glasgow University general council, held in November, 1915, measures were considered for creating a professional degree on the lines of the B. Educ. (Edinburgh).

FRANCE.

SERVICES OF TEACHERS AND STUDENTS.

The educational system of France, the université, which in normal times is impressive by its complete organization and apparent detachment from ordinary affairs, has become instinct with the national spirit in the present crisis. This change is reflected in the Bulletin Administratif, the official organ of the system, which before the war was a mere repository of orders, decrees, results of examinations, etc., but which has become a transcript of living interests. Each issue of the bulletin opens with the "Livre d'Or de l'Université," comprising the names of the teacher-soldiers killed or wounded, followed in every case by a citation from the honor roll of the army, the record of high courage and heroic sacrifice.

The devotion of teachers who remained at their tasks or responded to the call for substitutes is not overlooked; the official announcements pledge the Government to substantial recognition of these invaluable services, and the sincerity of these promises is proved by

practical measures. For example, a decree of February 15 confers new dignity upon the service of primary education by opening up the office of academic inspector to the head teachers of normal schools and to primary inspectors. Formerly the position referred to was filled from the corps of secondary teachers, but since primary inspectors are chosen from the primary teaching force, the new order brings the office within the reach of ordinary teachers. It also increases the bonds between primary and secondary education.

The requirements for the office of academic inspector have always been high as regards both scholarship and professional fitness. The new decree maintains this high standard. It provides that a candidate from primary education, aspiring to the office of inspector, must have the certificate (license) that would enable him to teach in a secondary school. A candidate who belongs to higher or secondary education must familiarize himself during a probationary period with the business of primary education. If he belongs to the latter department, he must become familiar with the affairs of secondary education by visiting the lycées and colleges. In order to secure full appointment from the minister, the candidate must obtain a certificate of aptitude from his superiors who report upon his work during his probationary term.¹

From a summary of conditions in October, 1915, as reported by the minister of public instruction, it appears that up to that time 30,000 teachers had been enrolled in the active fighting forces of France. Of this number 2,057 had fallen on the field of battle; nearly 8,000 had been wounded or taken prisoners; 700 had been mentioned in dispatches; 45 had been decorated with the Legion of Honor, 52 with the *Medaille Militaire*, 9 with the Order of St. George.

In the invaded districts teachers remained at their posts to safeguard the civil population in the absence of all other civil authorities. In the country districts the schoolhouses became the rallying centers; the school-teacher in every district received the official communications, and often copied them in his own handwriting to be distributed, or read them aloud to the assembled villagers. He read and wrote the letters for illiterates, and, in general, became the medium of communication between the district, the Government, and the army.

Under the direction of the school-teachers, during the first winter of the war, over 500,000 woolen mufflers, pairs of socks, mittens, etc., were made and forwarded to the troops in the field. Many schoolhouses were turned into "garderies" (playrooms) where the smaller children of the community were kept while their mothers and elder

¹ For text of the decree see *Bulletin Administratif*, Mar. 4, 1916, pp. 232-34.

sisters were at work in the field or factory. The children, whose ages ranged from 10 months to 6 years, were cared for from early morning until nightfall, fed, and often provided with clothing collected by the teachers. This work received no subvention from the State, but was supported entirely by funds collected by teachers. They instituted the "Noel du soldat," to provide Christmas presents for the troops in the field, each child giving a penny, which netted over \$100,000, while the teachers themselves, all over France, agreed to give at least 2 per cent of their monthly salary for Red Cross and similar purposes, and their contributions provided a monthly revenue of another \$100,000.

In schools upon the very line of battle the teachers, it is said, "carry on their classes stoically and pass in companies over the ruined roads to the pedagogical conferences." At Rheims, in the midst of the bombardment, schools were installed in the cellars of country houses under the charge of the primary inspector, seconded by the mayor of the town. Out of 715 pupils, 498 were instructed in these subterranean schools, as they were called. The course of study was successfully maintained, and 28 pupils, of whom 15 were boys, passed the examination for the leaving certificate. The greater part of the schoolmasters having entered the service, all these efforts fell upon the women teachers. In this invaded district four times every day they risked their lives in the streets where few houses remained to offer shelter in the moment of danger. They bravely faced extreme peril in order to reach the post of duty and of their devotions—the subterranean school. When the session was finished the instructresses voluntarily combined at Rheims to work for the soldiers.

By this ingenious expedient, due to the determination of the inspector and mayor, hundreds of children were kept off the streets and opportunity given them to continue their simple studies. This was a great service also for the sorely tried families. Fourteen women and four men maintained this brave service of the subterranean schools.

At the beginning of the current year the primary schools were returning gradually to their normal state, taking possession of buildings temporarily required for the war, and resuming the usual exercises. In the immediate zone of conflict, in the neighborhood of the trenches where the troops are continually passing and the administrative services of the Red Cross and the military staff require only temporary occupation of the school buildings, the country children are, as a rule, quickly brought back to the schools with as little interruption of the regular work as possible.

MILITARY OCCUPATION OF SCHOOL BUILDINGS.

A statement issued by the minister of public instruction respecting the primary school buildings occupied for the various services of the army in the Departments not included in the immediate military operations gives details as follows:

School buildings used for military purposes.

Class of schools.	Number occupied for military purposes at specified dates.			Number restored Sept. 15, 1915-Apr. 30, 1916.
	1914, Oct. 1.	1915, Sept. 15.	1916, Apr. 30.	
Normal.....	135	125	111	14
Higher primary.....	200	173	159	15
Elementary primary and infant.....	2, 015	1, 374	807	576

SAFEGUARDING THE CHILDREN.

At the final session of the educational conference of the allies held during the current year the minister of public instruction dwelt upon the unusual burdens that have fallen upon the teachers of France. This is an experience common to all the warring nations, but intensified in France by the larger body of refugee children to be cared for. Thousands of children from Serbia and from Belgium have found their place in the schools, and although welcome, they greatly complicate the social difficulties that have to be met.

In this same address the minister gave pointed expression to purposes which demand immediate action. Chief of these are care for the welfare of children and the large extension of school provision for the masses. He urged a continuance of all the efforts in behalf of children, the mutual aid societies managed by pupils themselves, the antialcoholic leagues, and the establishment of dispensaries and vacation colonies for the elimination of tuberculosis. These and similar works, he declared, have become an imperative duty for the salvation of the nation. Above all the care of children orphaned by the war is a sacred duty to which the schools are pledged. These children are accepted as the wards of the nation, and the Government will cooperate in every undertaking for their support and education.

In France, as in England, protests have been raised against the withdrawal of children from school to take the place, in fields and shops, of men called to the army. In a public appeal against this action Prof. Petit, long identified with the movement for adult education, insists that every effort should be made to supply the necessary labor from other sources, the aged and those incapable of bear-

ing arms, and where this fails that a system of half-time schools be adopted and the school programs strictly adjusted to the arrangement.

DEMAND FOR CONTINUATION SCHOOLS.

The realization of hopes for the future depends not only upon safeguarding the young, but also upon the increase of their training and opportunities. The minister reminded his hearers that obligatory primary education was an outcome of the war of 1870. In like manner it is necessary that obligatory continued education (*enseignement postscolaire*) should follow the present conflict. Of all propositions now entertained, this was declared to be "the most important and the most difficult." It can not be accomplished by the Government alone, in a nation like France, where individualism and local authority are encouraged. The minister expressed confidence, however, that just as after the disaster of 1870 obligatory primary instruction was universally demanded, so at the present time the Government will command an immense majority in favor of extending this obligation to include higher primary and continuation schools.

The purposes emphasized by the minister have already commanded wide and varied support from citizens and organizations. In particular the fight on alcoholism is vigorously waged. In this cause a society has been organized under the leadership of eminent men which at the initial meeting adopted the following resolution:

This conference calls upon the public authorities to suppress immediately and entirely the privileges granted to distillers of spirits and to apply strictly all laws and decrees relative to alcoholism. To this end the conference, without entering into details as to the financial projects under consideration by the minister of finances, demands that the legislative decisions respecting the privileges granted to distillers of spirits should be included among the financial provisions.

On every side the demand is heard that the provision of higher primary schools, which the law leaves to the action of local authorities, should be made obligatory. The higher primary schools that exist are models, but even in Paris their number is far below the requirements. During the year the teachers' association of the Seine Department called upon the civil authorities to take vigorous action in this matter. Their resolution on this subject is as follows:

Whereas considering the importance of the number of social values alone destroyed by the war which covers Europe with blood, it is indispensable to prepare for the future by providing that the best part of our school children shall continue their studies in order that they may be prepared for the work of social reconstruction;

Whereas the students accepted at different entrance examinations, especially those for admission to the higher primary schools and vocational schools of the city of Paris, are the most promising of our young people;

Whereas fearing to displease the voters, certain municipalities of suburban districts of Paris have refused to pass appropriations to meet the cost of the instruction of pupils accepted into these schools;

The association of public teachers of the Seine demands:

That the honorable prefect of the Seine recommend to the mayors to invite their municipal councils to reconsider their resolutions;

That, in case of refusal, the general council adopt the financial measures that are necessary;

That, moreover, the general council study in the future the question of higher elementary schools and solve it in a manner that best corresponds to the interests of the children as well as those of the department.

The work of popular education long maintained under the direction of M. Edouard Petit has continued, although with declining numbers and decided changes in the subjects of the lessons and lectures given for the benefit of adults. The report of the work for 1913-14 showed a total of 54,351 courses of instruction, of which 9,200 were in the Departments of France at present invaded, leaving 45,151 for the remaining Departments. The latter declined by 26 per cent in 1914-15; the subjects of the lessons were suggested chiefly by the war. They comprise the history and geography of the belligerent countries, the systematic study of bulletins, war maps, etc. The popular lectures, which reached a total of 125,000 a few years ago, numbered only 58,654 in 1913-14, and since then have been almost entirely replaced by what are termed "popular evenings."

On these occasions letters from the front are read or the poems of Victor Hugo, Deroulede, and Coppee recited.

The mutualites scolaires (mutual aid societies), fostered by the societies for popular education, numbered 871,000 members in 1913-14. For the following year there were reported 683,400 in the Departments not invaded. In brief, while the work of all agencies complementary to the State schools has been seriously affected by the war, they have continued their operations and promise to play an important part in the ultimate work of social readjustment.

RATIONAL USE OF THE CINEMATOGRAPH.

A ministerial circular issued during the year calls attention to the need of "vivifying instruction at all stages and of utilizing for this purpose the new resources that science has supplied." Reference is made to the cinematograph, which "satisfies the natural delight of the young in images and places the object before the eye, while the idea is presented to the mind, excites mental action, and extends the bounds of experience." The value of this agent is proved by its effects in the popular illustrated lectures and courses of instruction and by its introduction into many primary schools at the expense of the teachers themselves. In view of this opinion and experience a

commission extra parlementaire has been appointed to consider and report as to the means of employing the cinematograph in the different branches of instruction. The commission includes the minister of public instruction, M. Paul Painlevé, as president, Senator M. T. Steeg as vice president, and 40 additional members, all men of distinction in public affairs, in education, or in science.

UNIFYING INFLUENCE.

The sense of unity between the different orders of education is increased by the participation of all in the relief services necessitated by the war. It was expressed in the address delivered by the minister of public instruction on the occasion of a "gala" performance given on the 4th of March at the Comédie Française for the benefit of the wounded in the hospital at the École Normale Supérieure. At the beginning of August, 1914, the halls of this noted school were empty; its students were at the front. There remained of this great body only the young women and professors too old to enter the army, but everyone desired to bear a part in the struggle. They sought advice from the Society of the Women of France (Union des Femmes de France), and in accordance therewith the halls of the school became a model hospital, comprising the necessary material, a trained personnel, automobiles, and all the details of a complete organization. As the number of the wounded increased and the work expanded, larger contributions were made, and to the present time this hospital in the normal school has maintained 150 beds without recourse to the Red Cross Society.

In concluding his eulogy of this effort the minister said:

What has been done in Paris at the normal school has taken place throughout France in the lycées, colleges, and schools. Everywhere the lively collaboration of the Union des Femmes de France and the teaching corps has accomplished miracles. The task was enormous; the effort has been equal to the task. What eulogy could surpass that? The tribute that we pay to-day to the work of the École Normale Supérieure extends to hundreds of similar works of which this is the impressive symbol. As minister of public instruction I am proud to associate in this expression of national recognition the noble union of the women of France and the entire université.

THE SECONDARY SCHOOLS.

The statistical survey of education in foreign countries, chapter 37, includes a section on secondary schools which shows their status on the eve of the outbreak of the war. By reference to Table 2 it will be seen that the statistics there given for French secondary schools pertain to the year 1913. At that time the lycées for boys had 62,879 pupils, and the communal colleges 37,324. According to statistics since obtained by the ministry of public instruction, on

October 15, 1914, the pupils in the lycées had fallen to 41,631, and in the colleges to 20,498. This was a total loss of above 35,000 students. The statistics for October 15, 1915, show a decided improvement over the conditions in 1914. The students in the lycées for boys had risen to 50,316 and in the colleges to 23,902, which was an increase of 12,000 above the number reported the previous year.

In the secondary schools for girls there were 21,901 students in October, 1914, as against 29,693 the following year.

Presumably these statistics are not complete for the Departments invaded, although from occasional reports it appears that the schools of all grades, secondary as well as primary, in these areas are endeavoring to maintain their work.

Practically all the male teachers in the secondary schools capable of bearing arms have joined the forces. Their places meanwhile are supplied in various ways. Retired professors are called back; the few university students who remain assist in some measure in the secondary classes; and the women professors of the girls' lycées have been called in considerable numbers to take classes in the boys' schools.

The secondary schools have been particularly affected by the efforts to reconcile military demands with the interests of the service of public instruction. One article of the law of August 17, 1915 (law Dalbiez), authorized men not subject to military obligation to enter the military service for the period of the war with assignment to special duties. The men who take advantage of this opportunity, if they do not receive military compensation, are promised their full salaries as civil officers during the time of the engagement. A certain proportion of the teaching fraternity have responded to this offer on account of particular aptitudes, and as a consequence the service of public instruction, which has already been greatly depleted by the ordinary process of recruiting, is in danger of losing its entire force of men; hence new regulations are required in order to reconcile the demand for these special services with the equally pressing needs of public instruction. Secondary schools are particularly affected by the special call, which is chiefly for professors of the living languages to act as interpreters in the war zone and in the camps of prisoners and the depots of supplies.

THE UNIVERSITIES.

The universities of France are State institutions, and, therefore, are all equally affected by the war. Their condition was expressed in a few brief sentences by M. Liard in an address before the Musée sociale. University incomes, he explained, are derived from three sources: Student fees, State appropriations, and private benefac-

tions. The fees supply thousands of francs annually to the university treasuries, but since all the students of military age have gone to the front, this source of income has largely failed. At the same time private benefactions will be lessened because of the demand made upon the wealthy for the relief of miseries caused by the war. The State appropriations, which have furnished the greater part of the incomes, are also threatened by reason of the enormous expenditure incurred by the struggle.

Notwithstanding these disasters, M. Liard looks hopefully toward the future in the belief that new demands will arise for university services and that France will also draw larger contingents of foreign students.

The losses suffered by other higher institutions are illustrated by the following examples: The *École des Hautes Études* enrolled in 1913-14 a total of 473 students, of whom 187 were foreigners; in 1914-15 the enrollment was 202, including 57 foreigners; for the present year the enrollment has been about 100, the foreign representation remaining about the same as the previous year.

At the opening of the Catholic Institute of Paris for the fall term 1915, it was recalled by the rector that the session for the previous year had been opened with much hesitation. At that time 20 professors belonging to the institute were in the army and another, an Alsatian, was a prisoner in Germany. The librarian and three of his assistants and the assistant of two scientific professors were mobilized and for a moment it seemed as if it would be impossible to reorganize the work. It was accomplished, however, the officers and teachers willingly doubled and even tripled their ordinary work, although their salaries were decreased by reason of the diminished resources of the institution. Moreover, a large proportion of students of the classes of 1915 and 1916 had been called to arms. Notwithstanding these conditions, however, the classes were organized, and at the close of the year the results of the examinations proved that excellent work had been accomplished. The number of diplomas conferred was as follows: In the faculty of theology, 32; in the faculty of law, 2 doctorates, 86 licentiates; in the faculty of letters, 16 licentiates and 2 higher diplomas; in the school of science, 11 certificates. The opening ceremonies of 1915 were marked by memorial services for 112 students and graduates of the institute who had fallen in battle. Among those who have been highly honored for their bravery were comprised 13 who had received the Legion of Honor; 6, military medals; 52, the Order of the Army, including two bishops who had been both students and supervisors of the institute.

NEW DEMANDS.

The conviction that the universities of France must bear a large part in the endeavor to restore prosperity to the nation led to the introduction of a bill in the senate during the current session, providing for the creation of faculties of applied sciences in the universities. The author of this bill, Dr. Goy, explained its purposes as follow:

The necessity which has been imposed upon us, during the actual course of the war and which will be still more generally realized when victory has been achieved, of completing and increasing our industrial products, obliges us from this moment to seek the best means of forming a corps of engineers, managers of great industrial enterprises, etc., which will be necessary for our economic reorganization. Thus the question of technical education, its development, and its better adaptation presents itself at this moment with a new, practical interest and a marked urgency. In a circular issued September last the minister of public instruction defined the obligation which will rest upon the universities in this matter as follows: "To insure the renaissance of the national economic activity by means of the sciences, and to take the direction of the vast movement for the revival of the chemical and physical industries which will of necessity follow peace."

The importance of provision for applied science as the complement of pure science in the scheme of university instruction is clearly shown by the results where the relation has been established. The Pasteur Institute was cited by Dr. Goy as a celebrated center of higher education which not only forms savants who contribute to the progress of science, but is also a veritable industrial establishment. Among the universities that have made special provision for the applied sciences he noted the Paris Faculty of Sciences, which maintains an institute of applied chemistry, the faculty of sciences at Grenoble, with its electrochemical institute, and corresponding institutes at Lille, Nancy, and Toulouse. At the same time in all these centers there is a lack of the means of specialization. For instance, the institute of applied chemistry in the Paris faculty is in need of chairs for the study of fermentations, for the combination of dyes, for the manufacture of artificial perfumes, and for the production of nitric acid by chemical electricity, etc. Attention was also called by Dr. Goy to the inferior position accorded to the courses of instruction in these institutes and to the diplomas which are accorded as the sanction of the studies. Hence they fail to attract the ablest students.

For the development of this department of education it is proposed that a faculty of applied sciences shall be created in every university, specialized according to the industries of their respective regions. In this way there would be established in France centers of the higher technical education, including altogether the totality of the applied sciences. The admission requirements would bring

a new class of students into these faculties, young men who are drawn by natural inclination to technical pursuits, but by reason of their profound study of general science would be interested, after leaving the university, in the continued exercise of research. Thus, having full sympathy with the discoveries and the instruction of savants, they would aid them in turn by their experiences, and the manufactories would thus become laboratories.

The bill presented by Dr. Goy has been under discussion in all the university centers of France during the year and, although many modifications of its provisions have been suggested, its main purpose has been everywhere approved. The text of the bill is as follows:

ARTICLE 1.

There shall be created by decree, in each university, a faculty of applied sciences devoted to higher education in the technical arts and the industrial applications of science. In the smaller university centers the faculties of science shall be transformed into faculties of the applied sciences.

ARTICLE 2.

The new faculties shall be integral parts of the respective universities in the several centers in which they are established. They shall be subject to the same regulations, possess the same rights and prerogatives as the other faculties so far as these agree with the provisions of the present law. They shall award the diploma of doctor in applied sciences. This diploma shall carry mention of the branch of science for which it is awarded.

ARTICLE 3.

A regulation of the public administration, established upon the advice of the superior council of public instruction, shall determine the conditions or the creation and the functioning of these faculties with the express reservation that the new faculties shall recruit their regular pupils from those who have secured the "*licencié ès sciences*," or the "*certificat d'études supérieures*;" that their courses of instruction shall be adapted to the industries of the region in which they are established; that the professors shall be chosen without other condition as to their diplomas, excepting as regards their scientific sanctions and industrial values, and that they shall only be obliged to teach during a limited time.

ARTICLE 4.

The existing institutes of applied sciences pertaining to the faculties of science shall be transferred to the new faculties of which they shall form integral parts.

In this connection interest attaches to the bill introduced into the senate in July, 1914, by M. Astier, seconded by 178 colleagues, relative to the organization of technical, industrial, and commercial education. This project was first submitted to the senate in 1913, the chamber of deputies having before it at the same time several bills relating to the organization of industrial and commercial education as a means of replacing the former system of apprenticeship. At

its origin, therefore, the senate bill was prompted by an industrial crisis; but it has received new impetus from the war, and while its ultimate passage must await the restoration of peace its provisions give direction to councils, which are shaping the educational policies of the future. The bill, which comprises five sections, is exhaustive. The first four sections codify existing laws and provide further for State aid for "écoles de métiers," which may be established by chambers of commerce, and to private schools of the same character which comply with official requirements.

Provision is also made in the bill for the establishment of free obligatory continuation courses for boys and girls under 18 years of age employed in commerce or industry. These courses may be arranged by civil authorities, by private committees, or by employers, but as a rule the lessons would be given during the legal working day, and employers would be required to arrange for the attendance of their juvenile workers. The emphasis placed upon commercial training by this measure has already led to the establishment of new schools, many of them in the interests of girls. Among the latter is reported a special school for the higher commercial training of girls, which has just been organized at Paris.

The legislative measures here considered disclose the same need that is felt in England. Science and education have both been too far divorced from industry. The condition was dwelt upon by Dr. Goy in the address already cited. He said:

In France the savants and the manufacturers trained in different schools have no contact with each other. In the past our savants would have regarded it as a humiliation to enter into industry, while, on the other hand, the French manufacturer has thought only of maintaining without change his methods of production. * * * Hence our industries have followed at a halting pace those of other countries, where the sciences and the technic arts are closely united. Science itself has been the loser. It would have found in association with industry the means of fruitful discovery.

As regards the requirements of war, the mistake has already been corrected. By a decree of August 11, 1914, a Government committee on inventions was created, and the following year (Nov. 13, 1915), in accordance with a report presented to the President of the Republic by the minister of public instruction, in agreement with the ministers of war and of the navy, a decree was issued instituting in the ministry of public instruction an office for inventions pertaining to the national defense. The new office is charged with the duty of making a careful examination of all propositions submitted by inventors, and also with that of conducting scientific researches which may be requested by the ministers of war and of the navy. Plans and models submitted by inventors, which are accepted as of possible military application, will be submitted by the office of inven-

tions to the technical officers of the ministers of national defense. Officers and experts from these ministries will then be appointed for examining and testing the invention. The committee on inventions was attached to this department. Although by the terms of the decree its tenure is limited to the period of the war, it serves as a precedent for a similar service in the interests of reorganized society.

GERMANY

The disorganization of education in Germany, as in the other belligerent nations, has most severely affected the universities and higher educational institutions; the need for professionally and technically trained men has caused the drafting of medical students and students of higher technical schools for special services connected with the war. Nominally, the numbers of students have not considerably decreased, for the reason that students in active service are maintained on the rolls; the actual number of those continuing studies is in some cases as low as 15 per cent of those on the rolls. At the same time the proportion of women students has reached an unprecedented height.

The number of matriculated students in the 22 German universities in the winter semester of 1914-15 was 52,500, a decrease of 6,500 against the preceding year. In this number there were 4,000 women (an increase of 300), and 1,500 foreigners (a decrease of 3,600). The number of students in war services was 29,500 men and 400 women, which brings the actual number of German students in 1914-15 to 19,000 men and 3,600 women.

Some universities suffered a heavier draft on their students than others. At the University of Königsberg, for instance, out of 1,260 students, 1,057 were drafted for service; at Marburg, out of 2,049 students, 1,448 were drafted, etc.

The figures for the summer semester, 1915, show a still larger percentage of students in military services. The total number of matriculated students in that period was 52,566, of whom 34,386 were in military service.

According to the "Schulstatistische Blätter" of August 19, 1915, the proportion of students of higher technical schools who were in active service or in other services connected with the war, was about 80 per cent. The records of attendance show the following numbers of students actually attending classes: Munich, 409; Dresden, 407; Berlin, 378; Karlsruhe, 221; Hannover and Aachen, 186 each; Darmstadt, 183; Stuttgart, 121; Brunswick, 101; Danzig, 91; and Breslau, 41.

The teaching profession has suffered loss of members called out for military duty amounting to 34.39 per cent for the Empire. The total

number of teachers in active service, as obtained by actual enumeration made in 1915 by the three teachers' associations, was 64,501.

In almost every larger city the school buildings have been turned into barracks. Some cities, particularly those in frontier districts, have been compelled to surrender all their school buildings to soldiers. Berlin has escaped the general condition, but even in that city many school buildings have been occupied by the soldiers. The school children that are obliged to vacate their building usually find shelter in the one nearest. The pupils of the two schools are then taught in turns; one school in the morning, and the other in the afternoon hours. In Breslau all the school buildings have been requisitioned by the military authorities, and the teachers compelled to look for other available places for continuing instruction. A teacher in that city writes that he found a pool room attached to a closed saloon, and arranged his classroom there. He took his seat on the billiard table, the pupils standing around listening to his instruction.

Even more important than the external difficulties described are the effects of the war upon the internal organization of the school system. In Berlin alone 2,100 teachers have been recruited for the war. This constitutes half of all the male teachers and nearly one-third of the entire teaching force of the city. Until a recent date no steps were taken by the school board to retain teachers for the professional service. This course was generally approved by the teachers, who believed that the service to fatherland was of foremost importance. But as the war progresses the problems arising from it grow more urgent, and their consideration becomes imperative; the military and civil authorities must consider seriously which employment of teachers is of more importance to the country, even for the time being—garrison service or professional work.

During the early period of the war school affairs could be adjusted to meet the changed conditions with comparative ease. But in the course of time the difficulties have multiplied. Schools have been obliged to assist one another; numerous changes due to the war have been introduced, or, in the language of the war messages, "regrouping and shifting have taken place." To make up for the inadequacy of teaching forces, the working hours of the remaining teachers have been prolonged. Classes have been combined and the instruction shortened. The teachers—women as well as men—have taken up the extra work in the spirit of enthusiastic self-devotion that animates the whole nation.

The observer from whom this account is taken, in the main, declares:

It is obvious that in the atmosphere of strain and overwork the instruction can not follow the same course as in time of peace. Almost every teacher has devised his own methods to meet the temporary conditions. The choice of

themes for class work reflects everywhere the preoccupation of minds with the war. It is seen in war drawings, war themes of class compositions, war dictations, etc. The children learn by heart poems reflecting the spirit of the time, read selections about the war, and sing patriotic and warlike songs. It is too early to explain just how this warlike spirit affects the spirit of the school. There are no outward signs; no investigation would disclose it. It is only felt by the teachers and, perhaps, in a vague way, by the children.¹

INCREASE OF JUVENILE OFFENSES.

The unruliness of youth deprived by the war of usual restraints has already led to corrective measures on the part of the schools. The city authorities of Mittweida, under the date of July 5, 1915. issued the following announcement:

A large part of the school children are becoming more and more wild. Boys and girls behave shockingly and are not afraid to commit offenses against private property or to damage fields and public grounds and walks. This observation fills all who are responsible for the rising generation with great anxiety, but it also compels them to check this menace with relentless firmness and by the application of all measures that are at their disposal. Parents and educators are hereby urgently requested to assist energetically the authorities and the school in this trouble. At the same time attention is directed to the fact that they will be responsible for the damage done. The provision of the school rules that the school children seen alone after 9 o'clock p. m. in the street are subject to punishment will be reinforced and applied unswervingly.

In Chemnitz three associations for child welfare have combined their efforts and intend to issue a similar appeal to parents and educators.

The Central German Committee for the Protection of Children has received from many large cities reports of an appalling increase of juvenile offenses. This condition in Berlin is illustrated by the following data: The younger boys showed during the first quarter of the war a marked decrease of crime as compared with the corresponding period of 1913. But during the last three months of 1914 the number of reports to the central committee climbed up as suddenly as it had decreased before, namely, from 319 to 417, while during the same period of 1913 the change of numbers was from 322 to 323. It must be remembered that a large part of the boys of the ages 16 to 18 are at the front as volunteers (*Freiwilliger*), so that the increase affects especially the two younger classes.

The movement in regard to juvenile offenders appears from the table here given:

Juvenile offenders.

Time periods.	12 to 14 years.		14 to 16 years.		16 to 18 years.	
	1913	1914	1913	1914	1913	1914
Third quarter.....	50	38	83	101	137	104
Fourth quarter.....	32	85	102	137	120	108

¹ M. Lørsen, in *Pädagogische Zeitung*, Feb. 10, 1916.

In the first quarter of 1915 the number of reported cases increased from 85 to 98 for boys of the ages 12 to 14, and from 137 to 160 for boys 14 to 16 years old.

A considerable increase of offenses is also observed among young girls. An inquiry has been started in order to establish the proportion of offenses among the young girls and their prevailing character.

Among probable causes advanced in explanation of the sudden increase of juvenile offenses are the lack of surveillance at home, owing to the absence of fathers who have been drafted for service, and the exciting effect of the war upon the imagination of children.

PROVISIONS FOR THE PROTECTION OF CHILDREN.

Owing to the fact that so many mothers are engaged in factory work, in some of the German communal schools children are urged to do their review study in the afternoon hours at the school where teachers are provided to look after them and to assist them in preparing their tasks. The number of schools having such arrangements was increased during the winter. The main object of these afternoon studies is to keep children away from the street.

In view of the food problem confronting the German nation, the development of school gardens has assumed special significance. Rapid increase in the number of school gardens is noted in German educational publications. The authorities are lending this movement all possible assistance and encouragement. "Das Schulhaus" (April, 1915) states that in Prussia there were 213 school gardens established by the schools themselves and 53 established by private means. This development of school gardens is largely due to the decree of the "Kultusminister" issued a few years ago, which orders every school, including those located in the country, to furnish a school garden for its pupils.

At the same time steps have been taken throughout the country by numerous societies for child welfare, by authorities, and new organizations formed for the purpose, to provide food and care for poor children whose mothers are either destitute or otherwise unable to attend properly to their wants.

Free school lunches have considerably alleviated the suffering of children. But the number of needy children is so enormous that the task of providing for the lunches is too great for any single organization or municipality. Even the city of Berlin could not undertake to provide for school lunches entirely by municipal funds, and limited itself to financing the citizens' organization, "Verein für Kinder-volksküchen." The amount disbursed by the city for that purpose in 1915-16 was 600,000 marks. There is tendency to connect the school lunches with instruction in cooking for girls.

ITALY.

Information as to current educational conditions in Italy is meager, since the chief effect of the preparations for war, and final participation in the struggle, in regard to education has been to defer all plans for the development of that interest.

Efforts to alleviate suffering among teachers and their families, and to provide food and shelter for school children made destitute by war, continue to occupy the attention of teachers' associations and private societies. The National Association of Teachers has established a fund in aid of teachers and their families impoverished by the war, the money to be raised by the gift of one day's salary from every teacher, and increased by contributions from additional amounts that may be earned by teachers who take over the classes of teachers in active service.

The National Association of Teachers has also created a source of aid for war orphans by the publication of a periodical which will be sold at all schools for 15 cents a copy. The Patronato Scholastico, which according to a law of 1897 is formed in every parish to aid poor school children, has greatly increased its services in the present emergency.

Early in the current year the Unione Italiana dell'Educazione Popolare combined with the Federazione Italiana delle Biblioteche Popolari in the call for a congress to consider grave problems of popular education growing out of the war. The program covers the same questions that are uppermost in the public discussions of England, France, and Germany. It comprises assistance to children before and after the regular school age, vocational education, preparation of emigrants for the industrial conditions of foreign countries, technical reeducation for the mutilated victims of war, assistance to war orphans, etc. The immense interest excited by these subjects is indicated by the prominence of the men to whom these various topics were assigned, including senators, Government officials, experienced teachers, and directors of industries.

NEW LIGHT ON EDUCATIONAL PROBLEMS.

In addition to the effects of the war in disorganizing schools and exposing children to evil conditions, there are other results which are not only experienced in the warring nations, but will inevitably extend beyond those limits. Chief among these is the work of reeducating disabled soldiers, which has reached enormous proportions in all the countries engaged in the struggle. This work takes two main directions, one pertaining to bodily injuries, the other to impaired mental powers. The former concerns two classes of disabled men, viz, the blind and the maimed or crippled. In both these cases there

is extended experience to guide in the effort. The material aids and methods of instruction applicable to the blind have been thoroughly worked out by special schools established for them. The main difficulty here is to obtain a sufficient number of teachers to meet the immense increase in the demand for this kind of training.

With regard to the crippled, also, there are precedents of great value to guide in the work. The Scandinavian countries have long been distinguished by provision of this nature, the most celebrated of all the establishments in these countries being the school for cripples at Copenhagen. Belgium has an important institution of the same kind at Charleroi; Germany has similar establishments at Munich, Hamburg, and other well-known centers; similar institutions are found in different parts of France, chiefly under the direction of the Freres de Saint-Jean-de-Dieu; and at Petrograd an institution for the training of mutilated soldiers, established after the Manchurian war, has accomplished great results in overcoming the effects of various forms of disability. Here again the chief difficulty arises from the great increase of facilities and resources required for the training of the thousands of maimed men who must, if possible, be fitted for the industries of which they are still capable.

The greatest problem which this work of reeducation presents is that of men whose mental powers have been partially or, for the time, entirely destroyed by brain wounds or by shock. These cases must be dealt with individually, and require the attention not only of a teacher by also of a physician. Indeed, in the majority of cases, the teacher can do nothing until the physician has in some degree restored the lost powers.

The types of mental infirmities which may be treated by educational methods are almost entirely comprised within the meaning of the term "aphasia." This may appear as inability to speak at all or inability to understand speech, or both. These symptoms exist in various degrees which have been carefully analyzed by Herr Volk, a teacher in a school for German soldiers in Cologne. In this article ten types of aphasia are enumerated. These include, besides the types commonly recognized, inability to form correct sentences, which may be overcome by methods similar to those used in teaching foreign languages; inability to read, due to the severance of communication between the visual and auditory centers; inability to write from the failure to recognize the shape of letters; optical defects which prevent the patient from understanding what he sees, though his eyes are uninjured. This is treated by exercises in visual observation.¹ Experience gives hope that in most cases the victim can be restored to the normal use of speech through the efforts of a skilled teacher.

¹ Herr Volk. Article in *Pädagogische Zeitung*, Jan. 20, 1916.

In this connection it is interesting to note an account of a successful experiment in dealing with dumbness, one of the rarest cases on record, since most of the wounds that destroy the brain centers of speech are mortal. The patience, the intelligence, and the skill required to restore this lost power are illustrated, step by step, in the processes employed by the writer, a man of large experience in educational matters and well known in this country as well as in Europe.¹

The endeavors to restore to society and to industry the forces that have been ruthlessly wrecked by war have a sufficient motive in the spontaneous impulses of human sympathy and in national requirements. They have, however, developed an unforeseen importance in respect to education. The records of these cases, which are rapidly accumulating, afford invaluable lessons applicable to the training of defective and abnormal children, a problem which at present engages the attention of governments and educators in all civilized countries.

A second effect of the war, which can not be ignored, relates to the education of women. New conceptions of the province which women must fill in public affairs, as well as of their capacity, have taken shape in the present emergencies. Larger opportunities for their higher education, and provision for more diversified forms of technical and vocational education in their interests, have already resulted as a consequence of the war. It is impossible at present to indicate the extent or the radical nature of the change that will thus be effected in educational systems, but as indicating the certainty of woman's fuller recognition in the fields of higher education and the services for which it prepares, a few incidents are suggestive.

In England the only universities that do not admit women to full privileges are Cambridge and Oxford, and even here the barriers are rather the result of regulations and long-established conditions, which can only be changed by legal or other formal action, than of pronounced opposition. It is at this moment significant that the senate of Cambridge University has decided that certificates in research shall in future be granted to women students.

In France 104 women teachers were employed in the lycées for boys and 293 in the colleges in 1915. The number included 14 who were teaching Latin. This fact is important, since the policy of introducing Latin into the lycées for girls has been long opposed, and it was not until recently that a few experiments were authorized in that direction. It is further worthy of note that the opening lecture of a course on engraving in the seventeenth century was delivered at the Sorbonne the present year by Mlle. Duportal, the woman thus

¹ Brereton, Cloudesley. "Teaching the Dumb to Speak," *Jour. of Educ.*, London, August, 1916, p. 457.

distinguished having been the first to gain in France the "doctorat ès lettres." At about the same time Mme. Ioteyko, a Polish lady, who had studied at Paris, delivered a lecture at the old Collège de France on the subject of "Fatigue in the biological aspect." It may be recalled that a few years ago Mme. Curie was appointed to the chair in the Paris Faculty of Sciences made vacant by the death of her distinguished husband, but the presence this year of a woman lecturer in the Collège de France was a departure from immemorial custom.

Even more significant than these instances is the fact that the Institute of Technology for Women at Moscow has received official sanction from the Russian Government, which gives its diplomas full standing and entitles its graduates to positions as engineers, architects, etc. It is stated that a number of the women graduates of this institution "have specialized in mining; others have become expert in the good-roads movement, which is a vital issue in Russia; several will undertake duties connected with the rapid extension of the canals and waterways."

It need hardly be added that the discussions of curricula for schools and universities have taken new direction as a result of the war. This is especially noticeable in respect to modern languages. The consensus of opinion appears to be that the value of language in a scholastic scheme is to be determined by the literature or the scientific works of which it is the medium. At the same time it is evident that there will be a shifting of values in this respect as a result of the war. Already new importance has been imparted to the study of the Russian language.

In this connection interest attaches to the following statement:

Facilities for the learning of Russian are provided at the universities of Liverpool, Oxford, Cambridge, and London (King's College), and at University College, Nottingham, as well as by the London County Council. The Russian honors course at Cambridge is a three or four years' course, offering the choice between Slavonic philology and Russian history and institutions, the latter an indispensable equipment for a better acquaintance of the Russia of to-day. For obtaining a degree one other language is required, the most advantageous combinations being either Russian and German (for business and scientific purposes) or Russian and French (for literary purposes).

The teaching of Russian is more fully developed in Liverpool than anywhere else in the Kingdom. In London, though the commercial teaching of the language has been taken in hand by the London County Council, the higher teaching, both of language, literature, and history, still suffers woefully from lack of endowment. Steps are being taken at this moment to remedy this defect, and to make the University of London what it ought to be, a dominant center for consolidating the friendly relations that now exist between England and the Slav world. King's College, which has been from the first the university center for the teaching of Russian in London, is trying to establish an adequately equipped school of Slavonic studies, which will form a focus for the

members of the various races who happen to be in London, and interpret their history and literature adequately and attractively to educated English people. The teaching of commercial Russian will be of little political use unless the more literary and scholarly side of the matter is also developed.

The long connection of King's College with Russia has resulted at the present moment in the interesting development that about 70 Russian refugee students are studying engineering and medicine at the college. The two important public lectures which were delivered during last term on "The Spirit of Russia" and "The Spirit of the Serbs" attracted large audiences, over which Mr. Austen Chamberlain and Sir Arthur Evans presided. They also elicited a letter from one of the lecturers, Dr. Seton Watson, the authority on the history of the southern Slavs, in which he suggested the formation of some such Slavonic school at King's College, and generously offered to equip a Slavonic library with the main classics of Czech, Slovak, Serbo-Croat, and Bulgarian literature, and the necessary philological works and dictionaries dealing with these languages, and to contribute annually to the funds of such a library. This offer has been placed before the foreign office, the board of education, and the board of trade, and it is earnestly to be hoped that Government support will be given to the scheme.

In August of the current year the French minister of public instruction addressed a circular letter to the academic rectors with respect to the recognition of the Servian language in the examinations for the baccalaureate. The circular announced that in view of many inquiries on the subject it had been decided that candidates for the baccalaureate, natives of Servia, may present, as an "exceptional and provisional" privilege, their native language in both the oral and written examinations for that diploma authorized for sections B and D; that is, the section having Latin but no Greek, and the section in which modern languages are substituted for Latin. The rectors are instructed to bring this matter to the attention of the deans of the faculties of sciences and letters. The program of the examinations in the Servian language is under consideration and will be announced before the next session of the examining committees.

EVENTS OF INTERNATIONAL INTEREST.

The tercentenary of the death of Shakespeare was celebrated during the year with impressive ceremonies. The war necessarily interfered with the elaborate plans which had been originally formed for this occasion in England; nevertheless much was done to impress upon the public, and more especially upon the young, the significance of this event. At the Royal Victoria Hall, London, a Shakespeare festival was continued from April 22 to May 5, to which the London Shakespeare League made an unusual contribution by reviving a contemporary satire in which one of the characters presumably represents the poet himself.

Special celebrations were held in the schools of London and throughout England on the 3d of May, following a meeting at the Mansion House, London, on the evening of May 2, which gave opportunity for representatives from all the British dominions as well as from foreign countries to pay tribute to the master dramatist of the modern world.

The tercentenary of the death of Cervantes was commemorated on the 23d of April, current, with many imposing ceremonies in his native land, and appropriately commemorated in all centers of learning.

In England a project was started for an educational endowment to be applied to the foundation of a chair in Spanish in King's College, London. Commenting on this proposition, the London Times says:

Such a chair (established on the tercentenary of the death of Shakespeare as well as of Cervantes) would excellently typify the union of Spain and Great Britain in the common joy of having produced, contemporaneously, for the whole civilized world, the greatest of all romancists and the greatest of all dramatists.

The international sympathies excited by the war are illustrated by ceremonies in honor of the Belgian poet, Emile Verhaeren, held at Paris May 29 of the current year. Before the distinguished company of men and women assembled on this occasion the minister of public instruction, M. Painlevé, paid eloquent tribute to the poet whose verse has immortalized the tragic experiences and emotions resulting from the European catastrophe. It was natural that in this tribute the name of the Italian poet Gabriele d'Annunzio should be associated with that of his Belgian contemporary.

The memory of the great Italian savant and clinician, Guido Baccelli, was honored at Rome by appropriate ceremonies held at the Capitol on the 20th of April. On this occasion the French Republic was represented by Prof. Joseph Teissier, of the Faculty of Medicine of the University of Lyon, who had been designated by the minister of public instruction by reason both of his distinction and his well-known friendship for the Italian savant to take part in the ceremonies.

Among the important events of the year noted by the German educational publications, first place is given to the establishment of the Central Institute of Education and Instruction (*Zentral-institut für Erziehung und Unterricht*). The inaugural ceremonies took place at Berlin on March 21, 1915. The minister of ecclesiastical affairs in the inaugural address set forth the purpose and organization of the institution briefly as follows:

For a long time it has been the aim and the earnest desire of the educational administration to create one common central institution of information and practical activity for the entire realm of education, so widely ramified and

diversified. The want of such an institution has been felt with increasing acuteness, and could not be met by the several distinct establishments created in the course of time to perform tasks corresponding to the subdivisions of a central institution, although these establishments have, beyond question, performed useful service within the scope of their special purposes.

The institute will be divided into three principal departments: Department of information; department of exhibitions; and department of pedagogical work. Its main task consists in the collection of specimens and sets of historical and practical material.

The division of information has its particular task, that of keeping informed about current events in education and furnishing information upon the following subjects: Organization and administration of education and schools; school buildings and equipment; school programs and curricula; methods of instruction and their results; textbooks; illustrative material; libraries of teachers and students; school hygiene; welfare and protection of children.

A central institution that can give information and advice in all these matters and offer opportunity for more profound and more penetrative study, is, in view of the steadily increasing complexity and diversity of our pedagogical systems and tendencies, a particularly urgent necessity.

The division of exhibitions is to furnish illustrative material required for the understanding of such matters as school building and equipment, school hygiene, textbooks and materials of instruction, educational experiments and their results, etc. It comprises two formerly independent institutions: The German Educational Exposition, and the Education Museum of the city of Berlin. This division will maintain a permanent exposition and send out traveling exhibitions.

The third division, that of scientific and practical pedagogical research, is to popularize the results of its work by courses, lectures, and practical information furnished to teachers, school boards, and to laymen interested in education.

In order that the Central Institute of Education and Instruction may perform its work in the varied Provinces, popularize it, give advice and information in the proper manner, the collaboration of experienced specialists is necessary. School teachers, communal officials, representatives of organizations, and other competent persons should assist in this part of the work. To avoid one-sidedness, there will be represented in the managing and executive staffs of the institution, besides the state, also important communal and professional organizations, as well as individual prominent specialists.

The Permanent Exposition of Education and Instruction is to remain at its present location, 120 Potsdamerstrasse. In the same building will be located a State-controlled institute for instruction in natural history, and the psychopedagogical division of the Central Institute. For the Central Institute itself a monumental building has been planned. Another institution to be merged into the Central Institute is the State bureau of information on school matters.

CHAPTER XXXIII.

EDUCATION IN RUSSIA.

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INTRODUCTION.

The progress accomplished by Russia during the decade following the war with Japan has been frequently commented upon with astonishment. While the popular interest has been centered chiefly about Russia's achievements in military preparedness, internal administration, and industrial development, the deeper social and cultural progress of the country deserves closer attention on the part of educators.

The activity of the Russian Duma has had a marked influence on the progress of internal reforms, especially those connected with the welfare of the common people. After its second reorganization, in 1907, the Duma entered on a course of legislative work which, although naturally slow and circumspect, has proved very beneficial to the country. This period, termed by the Russians the "Third Duma," includes important legislation pertaining to the introduction of a general system of popular education.

The full extent of educational progress in Russia during the last 10 years has recently been made known by publications in the Russian language which are not generally accessible to students of education. The most important among these are:

The Report of the Russian Minister of Public Instruction, published in 1915, and covering the period from 1910 to 1912, inclusive.

A summary of the educational legislation of the Third Duma, during the period 1907-1912, by E. P. Kovalevsky, entitled "Popular Education and Church Property" (Pt. I, St. Petersburg, 1912).

An elementary school census was taken throughout the Russian Empire on January 18, 1911. The first four volumes of statistics resulting from this census have appeared in print; they represent 4 out of 15 educational districts in Russia—those of Petrograd, Moscow, Kiev, and Kazan. The remaining volumes are not yet issued. The totals for the Empire have, however, been separately reported. The census comprised all the elementary schools of the Empire, including church, communal, and private schools of all kinds, as well as those pertaining to the different ministries, not

included in the reports of the ministry of public instruction. Prior to this census it was extremely difficult to obtain correct figures relating to schools outside the province of the above ministry. The last previous school census was taken in 1880.

All the above publications, as well as a number of other authoritative sources in the Russian language, have been freely consulted in the preparation of this chapter.

ELEMENTARY EDUCATION.

The control of elementary schools.—The great majority of elementary schools in Russia are directly controlled by the ministry of public instruction, which also exercises closest supervision over all private and communal schools. But a parallel system of elementary schools is also maintained by the Holy Synod. This body is completely independent in the management of its schools. An ary schools is also maintained by the Holy Synod. This body State, and the sums appropriated placed at the unrestricted disposal of the synod. Most of the schools maintained by the synod are of the type known in Russia as *literacy schools* (*školy gramoty*), that is, they simply teach children to read and write.

The ministries of war, interior, marine, agriculture, etc., control, each, a number of elementary schools with instruction adapted to different special purposes. The relative importance of the various ministries and the church as educational agencies is evident from the following table representing the percentages of pupils receiving elementary education in the different types of schools:

Ministry of public instruction.....	63.0
Holy Synod.....	35.0
Ministry of war.....	1.1
Ministry of the interior.....	0.5
Department of the institutions of Empress Maria.....	0.1
Imperial philanthropic society.....	0.3
Ministry of the court and domains.....	
Ministry of finance.....	
Ministry of marine.....	

The foregoing table is based on statistics of elementary education for 1910. Since that time the number of elementary schools has considerably increased. As the ministry of public instruction leads in the movement for popular education, it may be presumed that the relation has changed in favor of that ministry. In 1911 the enrollment in the various schools already indicated a growing predominance of "ministry" schools. The enrollment in percentages was as follows:

Ministry of public instruction.....	67.7
Holy Synod.....	29.0
Other agencies.....	3.3

In the following years, owing to large appropriations for the extension of elementary education, great activity in school building was developed by the ministry of public instruction. The educational debates in the Duma show the prevalence of the opinion that *all* education should be centered in the ministry of public instruction.

Movement for popular education.—The vigorous promotion of elementary education by the Russian Government is largely due to the attitude of the Imperial Duma. The Duma was established by the act of August 6, 1906, as a House of Representatives with very indefinite authority. On account of its radical attitude it was soon dissolved by the Emperor, and a new act of December 11, 1906, was proclaimed, instituting a new electoral system framed so as to limit the representation of radical elements in the Duma. The Second Duma, elected on the new basis, was soon dissolved. The act of June 3, 1907, created a new system of election that further restricted the electoral rights of democratic elements in the population. As a result, the Third Duma was more conservative and inclined to move by slow, gradual reforms rather than by revolutionary measures.

That the Russian Government recognized the necessity of extending the provision for elementary education was plainly shown in the First Duma. Before this body a representative of the Government made a statement which contained a promise on this subject expressed in the following words:

Recognizing the urgency of raising the intellectual and moral level of the masses of the population by promoting their education, the Government is preparing bills for the introduction of general education with extensive cooperation of social agencies, a reform of secondary education, and a reform of higher education. (Inaugural address, delivered May 13, 1906.)

Universal instruction and prospects of its realization.—In respect to elementary education the plan of the Government consisted in the gradual extension of the existing system with the view of bringing the schools within 10 years to the number required in order to provide education for every child in the Empire. For this purpose the ministry of public instruction was to receive an annual addition to the appropriation for elementary education, to the amount of 10,000,000 rubles.

This plan was taken up by the Third Duma in connection with appropriations for the ministry, and a law was passed, on April 4, 1908, providing for permanent addition to the appropriations for elementary education of an annual sum of 6,900,000 rubles, to be used for grants to zemstvos and municipalities for the establishment of elementary schools. Out of this sum 5,000,000 rubles was to be expended for teachers' salaries and 1,900,000 for new school buildings.

The special appropriations for elementary education during the four years of the operation of the new law were as follows:

Appropriations for elementary education.

Date of appropriation.	Ministry public instruction.	Holy Synod.
	<i>Rubles.</i>	<i>Rubles.</i>
May 3, 1908.....	6,900,000	
June 10, 1909.....	6,000,000	
Addition for new school buildings.....	1,000,000	
June 19, 1909.....		2,000,000
June 14, 1910.....	10,000,000	
Addition for new school buildings.....	4,000,000	
June 17, 1910.....		1,696,000
May 9, 1911.....	7,000,000	
Addition for new school buildings.....	10,000,000	
May 28, 1911.....		1,000,000

The law of June 13, 1912, as quoted by the Report of the Minister of Public Instruction, provided that:

Beginning with the year 1912, there should be disbursed from the funds of the Imperial Treasury for the permanent needs of elementary schools, as well as for other needs connected with the introduction of general education, in addition to sums disbursed for that purpose up to the present time, 8,000,000 rubles annually, with the proviso that the expenditure for the latter of the said needs shall not exceed 800,900 rubles annually.

The further growth of the special provision for introduction of general education is seen from the following figures given by the Russian Year Book:

The estimates for 1913 of the ministry of public instruction amounted to 136,734,000 rubles, of which 2,759,000 rubles was for scientific societies, etc., 7,652,000 rubles for universities, 31,767,000 rubles for secondary and special schools, 67,196,000 rubles for primary schools, 3,552,000 rubles for teaching staff, and 16,400,000 rubles for building and repairs. The last two items represent the additional appropriations for the introduction of general education. The total increase over 1912 amounted to 19,357,000 rubles, or 16.5 per cent. The bulk of this, 11,500,000 rubles, was intended for elementary education.

It was calculated that by the application of these annual increases Russia would realize general elementary education in 1920. The war will doubtless remove that time further into the future, unless the spirit of uplift pervading Russia at present produces some gigantic effort toward immediate realization of this educational aim after or during the war.

The ministry of public instruction, in accordance with the law, used the special appropriations for subsidies to zemstvos and municipalities which had presented schemes for the introduction of general education within their areas. At the close of 1910, out of 395 county zemstvos 303 had undertaken the gradual introduction of general elementary education and had accordingly received subsidies from the ministry.

The subsidies had a stimulating effect on the appropriations for education made by the zemstvos out of their own funds. In 1907, before the commencement of the general education activity, the appropriations of all zemstvos for elementary education amounted to 26,243,100 rubles. In 1910 the appropriations were 42,444,600 rubles. The journal of the ministry of public instruction for September, 1913, states that at that time only six county zemstvos had not taken steps toward the introduction of general education.

Permanent commission for the conduct of popular lectures.—Among the agencies of popular education, especial importance attaches to the education of adults, in view of the high percentage of illiterates in Russia. The ministry of public instruction has developed considerable activity in this direction through the permanent commission for the conduct of popular lectures. In 1912 the commission published 18 new popular books, with a total issue of 175,000. During the same year the total circulation of publications of this kind was 191,033 copies, valued at 25,637 rubles.

Lectures illustrated by slides were arranged under the auspices of the commission for Petrograd and the surrounding district at 105 different places. The number of lectures was 532, with a total attendance of 75,599.

The technical division of the commission, in view of greatly increased demands, extended its activity in 1912 by furnishing demonstration material and apparatus to zemstvos, municipalities, and school inspectors in charge of popular lectures in various educational centers of the Empire. Assistance was also offered to numerous institutions, to authorities in charge of education of the troops, to temperance societies, and to schools of various kinds.

In 1912 the commission instituted a division of educational cinematography, for which purpose an appropriation of 19,920 rubles had been placed at its disposal.

Statistics of elementary education.—The stimulus given to elementary education by the appropriations referred to resulted in a rapid increase of the number of schools and pupils as indicated by the following table, which comprises the elementary schools under the ministry of public instruction:

Year.	Schools.	Enrollment.
1910-----	37, 046	2, 650, 058
1911-----	59, 682	4, 186, 078
1912-----	69, 318	5, 155, 536

In 1911 the total number of pupils in elementary schools outside the control of the ministry of public instruction was 1,988,805, which brings the total enrollment for that year to 6,174,883. For 1912 the only available figures are those of the ministry of public instruction, appearing in the foregoing table. Presuming, however, that the

other schools had the same enrollment in that year as in 1911, i. e., 1,988,805, and adding this number to 5,155,536, a conservative estimate of total elementary enrollment for 1912 is obtained, namely, 7,144,341.

The total expenditure for the elementary schools under the ministry of public instruction amounted, in 1912, to 99,839,344 rubles, including 43,210,726 rubles contributed by the State.

The various sources of maintenance of elementary schools are shown in the following table:

	Rubles.
State treasury-----	43, 210, 726
Zemstvo taxes-----	27, 431, 598
Associations and guilds-----	8, 699, 190
Cities-----	13, 894, 287
Contributions by private persons and societies-----	2, 756, 061
Tuition fees-----	914, 977
Other sources-----	2, 561, 786
Balance in special funds from preceding years-----	370, 719
Total-----	99, 839, 344

The number of teachers of elementary schools in 1912 was 173,515, including instructors in religion, 48,834; male teachers, 53,415; female teachers, 71,266.

Kindergartens.—Kindergartens have not had much development in Russia. In 1908 they numbered about 100, all supported by private funds and patronized by wealthy classes. A Froebel society was organized in Russia as early as 1871, but owing to the indifference of the general public it has shown little activity. It is subsidized by the State to the amount of 200 rubles annually.

Higher elementary schools.—By the law of June 25, 1912, an important reform has been effected in the organization and programs of the old "urban schools." The reform brings these schools into definite relation to secondary education by providing for the admission of their students to the corresponding classes of the gymnasia. The main features of the reform are as follows:

1. The name "urban schools" has been changed to "higher elementary schools."

2. Provision has been made for the admission of girls, the old urban schools having been for boys only.

3. The duration of the course has been fixed at four years. The admission requirements call for the completion of a one-class elementary school. The courses of study have been extended, with adaptations to local demands.

4. The law has permitted the establishment of trustees' councils for each school at the option of the founders. The members of the councils are appointed by the founders of the schools. The trustees'

councils attend to the business management of the school, endeavor to secure the cooperation of society for the best arrangement of the school, observe the instruction and education imparted in the schools, and communicate their conclusions to officers of education and directors of schools. The trustees' councils also have the right to nominate candidates for the positions of directors and teachers. The final approval of the directors rests with the curator of the district, and of the teachers with the superintendents of primary schools.

The courses of study of the higher elementary schools differ in some respects from the corresponding lower classes of the gymnasias, the general tendency being to make the education given in these schools complete in itself. In consideration of these facts, the law provided that students who had completed the second class of the higher elementary schools should be admitted to the third class of the gymnasias. Such students, however, were required to submit to an entrance examination in modern languages.

The law also raised the prescribed amount of annual expenditure for individual schools from 4,170 rubles to 7,490 rubles, the increase to be used in augmenting the salaries of teachers from 540 to 960 rubles, and of directors from 150 to 300 rubles. Other items for which expenditure was increased are: Singing lessons, from 75 to 150 rubles; teaching material, from 150 to 300 rubles. Physical training was introduced by a special appropriation of 200 rubles.

With reference to the measures to be taken to enforce the law, it was provided that the change from urban to higher elementary schools should be effected gradually, within a three-year period, beginning July 1, 1912. A number of lower elementary schools were also designated as subject to change.

The number of higher elementary schools, including old urban schools, on January 1, 1913, was 1,183, with 162,858 students. The number of teachers and employees was 10,532. In 1912 the expenditure for these schools amounted to 8,936,733 rubles, the State's share being 5,583,332 rubles.

County schools.—The still existing schools of the old type called county schools, 115 in number, had 18,225 pupils in 1912. In this number are included three mountain schools in the Caucasus, with 332 pupils. County schools are being transformed into higher elementary schools.

Schools of apprentices.—The regulations pertaining to the schools of apprentices are contained in the general educational statute of 1893. There are three types of these schools, as follows:

(1) Trade schools, whose official purpose is to impart practical training in various manufactures and the knowledge necessary for the intelligent pursuit of a trade. For admission it is necessary to

have completed the course of a lower elementary school. The age of candidates must be between 11 and 14 years. The course is of three years' duration, but a fourth year devoted entirely to practical work may be established at the option of the founders. The chief trades taught in these schools are locksmithing, carpentry, and smelting.

(2) Schools of trade apprentices, which give general instruction preparatory to private apprenticeship which the graduates are expected to take up. Admission requirements and the duration of the course are the same as in trade schools.

(3) Lower schools of apprentices, the official purpose of which is actual training in trades as well as theoretical instruction pertaining to the trades. Applicants for admission must either have completed the course of a lower elementary school or be able to read and write, in which case they submit to a special entrance examination. The age of the applicants must be between 13 and 16 years. The duration of the course is four years.

In addition to the three types above considered there are a number of trade schools having diversified programs, organized on the basis of special statutes.

On January 1, 1913, the number of all schools of apprentices, including those under special statutes, was 301, with 1,589 teachers and 17,945 pupils.

Considerable extension of classes in manual training in lower and higher elementary schools is reported by the ministry. The law of June 25, 1912, pertaining to the reform of urban schools, required that classes in manual training attached to these schools should be transformed into *vocational classes*, such as bookkeeping, farming, postal and telegraph service. To meet the increased expenses the law raised the State subsidy for vocational classes to 2,500 rubles and for manual training classes to 1,000 rubles. In 1912 the total amount of State subsidy for vocational and manual training classes attached to primary schools was 603,253 rubles.

In 1912 the total amount of State subsidy for vocational and manual training classes attached to primary schools was 603,253 rubles.

Training of teachers.—The question of adequate provision for the training of teachers assumed special significance in connection with the rapid extension of elementary education. Realizing that new schools built throughout the Empire would be of little value without a parallel extension in teacher training schools, the Government from the very beginning of the execution of its school building program made ample provision for the establishment of new teachers' seminaries.

The appropriation for elementary education for 1912 contained a clause designating the sum of 479,700 rubles for the maintenance of 14 new teachers' seminaries, and 50,000 rubles for the establishment of short-term courses for teachers.

On January 1, 1913, teacher training schools of the advanced type (institutes) numbered 27, and of the lower type (seminaries and schools), 115.

The number of students enrolled in the "institutes" at the same date was 1,818, and the number of teachers and other employees, 347: 22 institutes had higher elementary schools attached to them as practice schools. The expenditure for teachers' institutes for 1912 was 872,583 rubles, the State contribution being 786,772 rubles.

The total number of students in teachers' "seminaries" was 11,066; the number of teachers and employees, 1,460. The total expenditure in 1912 amounted to 3,695,456 rubles, including 2,799,358 rubles contributed by the State.

There were also special courses for teachers in connection with elementary schools and intended to prepare candidates for teaching positions other than those reserved for seminary graduates. The number of such courses in 1912 was 127.

Siberia.—The conditions that make the introduction of popular education extremely difficult in European Russia are intensified in Siberia in proportion to the enormous area of the country and its scarcity of population. In an area of 10,996,346 square versts (4,816,400 square miles) Siberia has only 8,719,200 inhabitants, of whom 14.6 per cent are native tribes. The density of population is therefore 1.8 to a square mile. With the exception of a few larger colonies, the inhabitants are scattered over a vast territory in little settlements which are almost isolated, owing to the lack of transportation facilities. The progress of elementary education in Siberia has nevertheless been steady, especially during the past decade.

On January 1, 1915, the total number of schools in Siberia was 5,190, of which 538 were in towns and 4,652 in villages. The number of schools in the various sections was as follows:

West Siberian school district: 2,728 schools, or 52.6 per cent of the total number of schools. East Siberian school district: 1,751 schools, or 33.8 per cent of the total number of schools. The Priamur district: 709 schools, or 13.6 per cent of the total number of schools.

The distribution of the primary schools in various Provinces and districts of Siberia, their kind, number, and percentage of the total number of schools in each Province can be seen from the following table:

Primary schools in Siberian Provinces—Percentage of whole number.

Provinces.	Two-class.		One-class.		Total.
	Number.	Per cent.	Number.	Per cent.	
Akmolinsk.....	37	7.1	481	92.9	518
Amur.....	28	12.5	196	87.5	224
Yenisei.....	43	8.1	489	91.9	532
Transbaikal.....	95	21.1	355	78.9	450
Irkutsk.....	80	11.8	598	88.2	678
Kamchatka.....			10	10.0	10
Maritime.....	76	16.8	387	83.2	463
Sakhalin.....	1	8.3	11	91.7	12
Semipalatinsk.....	7	6.4	102	93.6	109
Tobolsk.....	53	5.0	1,020	95.0	1,073
Tomsk.....	93	9.0	935	91.0	1,028
Yakutsk.....	13	14.0	80	86.0	93
Total.....	526	10.1	4,664	89.9	5,190

The west Siberian Provinces (Tobolsk and Tomsk) have the largest number of schools, followed by the east Siberian Provinces (Irkutsk and Yenisei); the smallest number of schools is in the Priamur district (Amur, Sakhalin, and Kamchatka Provinces).

At the beginning of 1915 in all the Siberian towns there were 538 primary schools, of which 57, or 10.6 per cent, were two-class schools, and 481, or 89.4 per cent, were one-class schools; in the villages there were 4,652 schools, of which 4,189, or 89.9 per cent, were two-class schools.

The municipalities of Tomsk, Tobolsk, Akmolinsk, and Transbaikal Provinces made widest use of the law of May 3, 1908, introducing general education.

NATIONAL CONGRESS ON EDUCATION.

In December, 1913, representatives of Russian elementary teachers from all parts of the Empire assembled in Petrograd for the First Russian Congress on Popular Education. Over 600 teachers attended the congress, which was divided into sections with special programs, in order that its extensive work might be completed in a reasonably short time without overcrowding.

The section of general questions adopted a resolution demanding the quickest possible development of the system of general compulsory education with a six years' course of study, and as a preliminary measure recommended the extension of the three years' course of study in the majority of existing popular schools to four years, and the appointment of two teachers to each school.

As a means of reducing illiteracy among the adults, the congress declared itself in favor of the establishment of evening classes, Sunday schools, university extension, and public libraries.

Coeducation was upheld emphatically by the teachers, who protested against the separation of sexes in the schools.

The congress also demanded an extension of the course of study in elementary schools to include history, geography, and natural science. In reference to the language of instruction, on which subject a special section was formed, the so-called "Russification policy" was unanimously condemned. The section expressed its opinion that the primary education of each nationality ought to be imparted in the spirit and in the language of the nationality to which the children belong and that the Russian language should be taught only after the children had acquired elementary knowledge in their own language.

The section on training of teachers devoted much time to the discussion of general problems pertaining to the work and life of teachers throughout the country. There was complaint of the insufficient knowledge which the teachers acquire in the seminaries, and wish was expressed that more general education and more special knowledge of the methods of teaching might be given by the seminaries. The diploma of the seminary entitles a young man or woman to a situation in an elementary school somewhere in a village, cut off from the intellectual life of the country, since the educational resources of Russia are largely concentrated in the larger towns and penetrate very slowly and with great difficulty into the interior. As a means of keeping up the educational standard of the school-teacher, the congress recommended that zemstvos should supply the teachers with daily papers and periodicals, and that the teachers should correspond with each other and form a school-teachers' trade union.

During the last few years much has been done toward helping the Russian school-teacher to get some experience of the world at large and to receive fresh intellectual stimulus from abroad. This has been achieved by organizing excursions, which receive assistance from the zemstvos and from the Government. Thanks to these excursions, during the past five years over 2,500 teachers of elementary schools have passed their summer holidays in western and southern Europe, and have had a chance to study the elementary school in various countries. The section of the congress recognized the great educational value of teachers' excursions, and advocated a further development of this highly useful work.

The section further urged upon the Government the necessity of freeing the teachers from military service, on the ground that Russia is very poor in intellectual social forces, and that every year 12,000 teachers' vacancies are left unfilled. The proposed reform would induce many young men to take up the teacher's profession and, on the other hand, would save to the schools the years passed by the teachers in the army. Last, but not least, the section de-

manded a minimum salary of 600 rubles per annum for the teachers of elementary schools, the present salaries being often as low as 300 to 400 rubles per annum.

At the closing session, January 3, 1914, it was resolved to hold the next congress in 1915. The results of the congress satisfied the teachers; it is felt that the opinions and demands expressed by this body will undoubtedly affect the Government sooner or later. Moreover, the work of the congress excited the energy and spirit of the teachers and gave them many ideas helpful in their everyday tasks.

SECONDARY EDUCATION.

General features.—The prevailing type of secondary school in Russia is the eight or nine year school, comprising the period from 9 or 10 to 18 to 22 years of age. It is generally preceded by a lower elementary school of three or four years. As a rule, the completion of the course of secondary school of this type leads to a maturity diploma which admits to institutions of university grade.

The order of secondary schools described above comprises classical gymnasia, real schools, a number of technical schools, some agricultural schools, commercial schools, cadet corps, etc.

Progymnasia and schools of similar grade have a course corresponding to the first four or six classes of the gymnasia and do not give diplomas of maturity. Recently a new type of secondary school, with a four or three year course corresponding to the last four classes of gymnasia or the last three classes of real schools has gained legislative sanction and is becoming increasingly popular.

Gymnasia.—The classical gymnasia are divided, according to the degree of preponderance of Latin and Greek, into three types:

(a) Old-type classical gymnasia. Both Latin and Greek are taught—Latin beginning with the first class and Greek with the third.

(b) Reformed classical gymnasia created by the rescript of April 30, 1905. Latin begins with the third class and Greek with the fifth, the corresponding time being utilized for natural science and law.

(c) Gymnasia with Latin only, established by the rescript of July 20, 1902.

The number of gymnasia in the Empire in 1912 was 393, with 137,594 pupils and 10,500 teachers and employees. The number of progymnasia for the same year was 41, with 5,341 students and 553 teachers and employees.

The total expenditure for 1912 for gymnasia was 21,222,320 rubles and for progymnasia 719,352 rubles, divided according to sources as follows:

Expenditures for gymnasia and progymnasia, 1912.

Sources.	Gymnasia.	Progymnasia.
	Rubles.	Rubles.
State treasury.....	10,014,498	230,109
Receipts from boarding departments.....	907,379	5,208
Tuition fees.....	7,455,283	323,010
From taxes of associations and guilds.....	192,296	30,936
From municipalities.....	724,197	40,219
From zemstvo taxes.....	416,520	22,139
Interest from foundations.....	319,802	628
Single donations.....	76,458	6,654
From the funds of Cossack communities.....	59,277	4,213
Special Jewish taxes.....	1,300	-----
Special sums and funds of the ministry of public instruction.....	234,753	13,780
From different sources.....	305,461	21,909
From remainders of special funds for the preceding years.....	515,097	20,550

The number of students who graduated from gymnasia with maturity diplomas in 1912 was 7,592. Of these, 97 per cent decided to enter higher institutions; nine-tenths of 1 per cent were devoting themselves to the study of fine arts, and eight-tenths of 1 per cent were engaged in practical occupations. Seventy-one gymnasia and one progymnasium had boarding departments accommodating 3,456 students. There were 16,017 students boarding with private families. Gymnasium officials keep lists of private boarding houses, and regular inspection of such places is made by special inspectors.

Real schools.—A majority of the Russian real schools are of the seven-class type, corresponding to the German "Oberrealschule." The ministry of public instruction is rapidly bringing the remaining six-class schools to the full seven-class type. In 1912 the number of seven-class schools was 208, out of a total of 276.

The total number of students for 1912 was 76,971. There were 4,228 teachers and principals. The number of graduates who had completed six classes of real schools was 5,159; graduates who had completed the additional seventh class numbered 4,224.

The expenditure for real schools in 1912 was 11,072,050 rubles, including 5,517,814 rubles, or 49.8 per cent, contributed by the State.

Gymnasia and progymnasia for girls.—The number of gymnasia for girls in 1912 was 825, and of progymnasia, 95. These schools are maintained almost entirely by private funds. In the total expenditure for 1912—22,158,258 rubles—the State contribution constituted only 1,778,300 rubles, or 8 per cent. The number of pupils was 303,690, and of teachers, 16,658. The gymnasia for girls have only seven classes, but many have an additional eighth class, mostly pedagogical. In 1912, 584 gymnasia had additional classes, and 13,754 graduates had completed the pedagogical course.

Technical schools.—Secondary technical schools are intended to "supply native industries with assistants to engineers and superintendents of industrial plants and with persons able to direct the

work of laborers." The number of such schools in 1912 was 57 (exclusive of 2 private schools, in Warsaw and Odessa). Of this number, 30 schools were of secondary grade and 27 of primary grade. The total number of pupils in both grades of schools on January 1, 1913, was 10,321. The total expenditure for 1912 amounted to 1,744,398 rubles (including State contributions, 884,791 rubles) for secondary schools, and 744,044 rubles (including State contribution, 352,090 rubles) for primary schools.

The secondary technical schools had the following divisions: Mechanical, chemical, structural, mining, and agricultural.

Recent reforms in secondary education.—An important law pertaining to requirements for admission to higher institutions was adopted by the Duma in 1911. Previous to that time graduates of gymnasia were the only ones admitted to all higher institutions. Graduates of real schools and commercial schools of secondary grade could enter only higher technical schools. Graduates of other secondary schools could not enter schools of higher learning unless they submitted to the complete final examination of a gymnasium and obtained certificates of maturity.

As the number of various special secondary schools in Russia is considerable, the inferior position of their graduates in respect to university education was felt very keenly. The ministry had been authorized by a series of imperial orders to grant to individual schools certain rights pertaining to the admission of their graduates to universities and special higher institutions, and to determine the scope and character of partial examinations for graduates of those schools which failed to meet the standard requirements in a few subjects only. The ministry, however, made limited use of its authority, and graduates of many schools of secondary grade remained barred from higher education. The law of 1911 provided that graduates of real schools should be admitted to physico-mathematical faculties of universities without examination, and to other faculties with examination in Latin only. Graduates of theological seminaries of Russian Orthodox denomination, of cadet corps, commercial schools, eight-class technical schools, teachers' institutes, and other secondary schools of the same grade were accorded rights of admission to higher institutions, but examinations in certain subjects were required of the graduates of schools in which these subjects did not receive as much attention as in gymnasia or real schools. The form of these examinations was determined upon by the ministry of public instruction. The law specially provided that the graduates of cadet corps and commercial and technical schools should have the same rights of admission to higher institutions as graduates of real schools.

Another important law affecting secondary schools was adopted by the Duma in the same session as the foregoing. It was sanctioned by the Emperor on June 10, 1912, and is known as the "law on middle schools." Its general purpose was to widen the field of private initiative in the establishment of secondary schools by removing certain restrictions in respect to types and programs of schools.

It must be explained in this connection that all schools in Russia pertaining to the ministry of public instruction are subject to rigid statutes defining the procedure of their establishment, their organization, curricula, and regulations of order, down to minutest details. The private founders, previous to the enactment of the law here considered, were allowed to contribute funds toward the establishment and maintenance of gymnasia and other schools, but these schools must be strict replicas of governmental schools of the corresponding kind and were controlled by the ministry through its usual administrative channels in the same way as governmental schools.

The report presented on this bill by the commission on gymnasia characterized the old legal status of private founders in the following words:

This order of things, while having its convenient side, as it gives the staffs and the students of the said schools all the rights enjoyed by the staffs and students of the governmental schools, has nevertheless been restraining to the founders who, having contributed funds for the establishment and maintenance of secondary schools of general education, could not have any appreciable influence upon the course of the school life and were not allowed to make any improvements for the benefit of the schools if the intended improvements did not fit the frame of the general statute provided for gymnasia and real schools.

To give private founders and societies a voice in the management of the schools established by them, the new law provided that gymnasia, progymnasia, and real schools maintained entirely or partly by private or association funds should be managed by councils of trustees composed of representatives of the said founders and representatives of the Government, the general tendency of the law being to give the first group of the members decisive voice in the matter of management of the schools.

The law also provided that in addition to the existing types of secondary schools, gymnasia composed of the four higher classes and real schools composed of the three higher classes may be established. As this type of secondary school was new in Russia, the law contained detailed specifications in respect to programs, salaries of directors and teachers, rights of the founders, etc.

In respect to ancient languages, the four-class gymnasia are identical with the four higher classes of gymnasia with one ancient lan-

guage (Latin). The three-class real schools correspond to the fifth and sixth classes of real schools, plus an additional third year corresponding to the additional seventh year in full real schools. Parallel commercial classes existing in a number of real schools are excluded from the three-year school.

The budget of the new four-class gymnasia was fixed at the following figures: Maintenance of buildings, 2,000 rubles; director, 3,750 rubles; 6 teachers, 7,875 rubles; gymnastics, singing, and games, 600 rubles.

The corresponding figures for the three-class real schools are as follows: Building maintenance, 1,500 rubles; 4 teachers, 6,300 rubles; gymnastics, singing, and games, 500 rubles.

The founders of the new type of schools were allowed to introduce additional subjects not included in the prescribed programs, such as English, clay modeling, etc., and modify the prescribed number of weekly hours for other subjects, according to local or special requirements, but subject to the approval of the curator of the district.

Another important provision of the same law permitted the establishment by private founders or societies of coeducational secondary schools. Thus the principle of coeducation has been admitted into secondary education after years of passionate debate. It will be of interest to American educators that in the debates in the Duma on the merits of coeducation the example set by the United States was quoted as conclusive evidence of the beneficial effects of the coeducational system. Dr. E. P. Kovalevsky, prominent in the educational work of the Duma, during a debate on the subject, introduced an extensive quotation from a report of Dr. W. T. Harris, former United States Commissioner of Education, bearing upon the ennobling effects on boys of association with girls of their age in the same schools.

UNIVERSITY EDUCATION.

Organization.—The administration of universities in Russia is regulated by the general statute (*Obščij Ustav*) which, after a series of modifications in 1804, 1835, and 1863, was finally enacted in 1884, and has undergone few changes since that time. Among the most important legislative acts of comparatively recent date should be mentioned the ukase of August 27, 1905, making the offices of the rector, the dean, and the secretaries of faculties elective and to be filled by university professors exclusively.

The present organization of universities in Russia, while similar to that of German universities, presents many original features. Russia is divided into 15 educational districts with a *curator* at the head of each district, and the original scheme laid down by Emperor

Alexander I called for one university in each district. As it is, however, in six districts universities are still wanting. On account of the uneven development of different sections of the Empire, the distribution of universities by districts can not at present be carried out, but the original purpose explains the part played in university administration by the curator of the district. As an integral part of the educational system of a district, the university is subject to the control of the curator, who reports to the minister of public instruction and to the Crown all important matters respecting the university in his district, decides in all questions which are not explicitly reserved to the minister, and confirms the decisions of the university council and the board of directors.

The direct administration of the university is exercised by the university council and the board of directors, both presided over ex officio by the rector. The council has general executive power over the university, while the board of directors attends to the business affairs of the institution. The rector is elected by the council from the number of ordinary professors for the term of three years; his appointment must be confirmed by the Emperor. There is also an office of prorector, who keeps the register of students, apportions scholarships, subventions, etc.

The universities enjoy certain privileges, such as importing books from abroad free of censure, publishing periodicals without previous censure, etc.

The division of the teaching staff is essentially the same as in Germany. There are ordinary and extraordinary professors, privat-docents, lecturers, etc. It must be observed, however, that the position of university professor in Russia has greater importance than elsewhere. In addition to ordinary teaching functions, professors are encouraged by the State to engage in scientific work, such as preparing and translating scientific books, undertaking scientific researches and travels, and delivering public lectures on scientific subjects. They are often requested by the Government, scientific societies, universities, or zemstvos to make certain special investigations, to give their opinion in important matters, etc. The report of the minister for 1912 acknowledges the active participation of university professors in the work of Government commissions, such as the commission for investigation of Russian railroads, the commission of uniform tariffs between Russia and Finland, the conference on governmental orders, etc.

Detached university departments.—In addition to the 10 universities whose statistics are given on page 615, there are the following detached university departments:

Institutions for men.

Names.	Number of institutions.	Number of professors.	Number of students.
Demidov Lyceum of Law	1	16	669
Historico-philological Institutes, at Petrograd and Niezyn.....	2	42	236
Lyceum of Czarevich Nicholas.....	1	19	255
Veterinary institutes.....	4	125	1,721
Institutes of oriental languages, at Moscow and Vladivostok.....	2	38	223
Pedagogical Institute at Moscow.....	1	13	54
Psychoneurological Institute at Petrograd.....	1	153	2,590
Total.....	12	406	5,478

Institutions for women.

Medical Institute at Petrograd.....	1	145	1,525
Higher courses for women at Petrograd.....	1	161	5,897
Higher courses for women at Moscow.....	1	251	6,477
Total.....	3	557	13,899
Grand total.....	15	963	19,647

The Shaniavsky Popular University at Moscow, a truly democratic institution offering higher courses of great practical value and admitting all persons who desire to pursue the higher studies, on January 1, 1913, had 3,669 students and 129 professors and instructors. The popular university is maintained entirely by private funds.

Universities of Russia, 1912.

Institution.	Date of foundation.	Professors and instructors.	Students.	Annual income or expenditure.	Distribution of students by faculties.					
					Theological.	Law.	Medical.	Historical-philological.	Physico-mathematical.	Oriental languages.
University of Petrograd.....	1819	252	7,282	\$537,369	.....	3,668	.....	682	2,805	127
University of Moscow.....	1755	419	9,390	1,336,463	.....	3,561	2,258	778	2,753	.....
University of Kharkoff.....	1804	199	3,002	435,198	.....	1,048	1,101	202	651	.....
University of Kazan.....	1804	169	2,012	541,668	.....	527	941	129	415	.....
University of St. Vladimir.....	1833	193	4,857	430,665	.....	1,992	1,523	379	963	.....
University of Novorossiysk.....	1865	133	2,025	418,840	.....	631	865	124	405	.....
University of Tomsk.....	1888	76	892	521,989	.....	316	576	.....	.....	.....
University of Yurteff.....	1632	144	2,251	482,817	149	553	1,114	109	316	.....
University of Warsaw.....	1869	86	2,415	343,968	.....	962	626	544	283	.....
University of Saratov.....	1909	45	412	127,871	.....	.....	412	.....	.....	.....

CHAPTER XXXIV.

EDUCATION IN TURKEY.

Of the numerous reforms whose urgency was recognized by the new Turkish Government following the change of régime in 1909, one of the most pressing was the creation of a comprehensive system of education organized in imitation of western systems. This reform was not, however, accomplished when the present war broke out and must await peaceful conditions for its fulfillment. It was recognized by the reform government that the undertaking would be one of extreme difficulty, not to be realized at once in the midst of troubled political conditions.

Nominally, compulsory school attendance has been in operation since 1840, but the law was not enforced. The latest enactment on the subject is the provisional law of October 6, 1913. Under this law all children from 7 to 16 years of age must attend public or private schools. Children of school age may also receive education at home, subject to certain tests. The State schools are under the direct control of the ministry of public instruction, which also exercises a general supervision over schools maintained by non-Moslem communities.

The annual appropriation for public education in Turkey was \$500,000 in 1878. During the last days of the old régime it reached the sum of \$2,250,000. Immediately following the revolution the school appropriation was raised to \$3,375,000, and in 1913 it amounted to nearly \$5,000,000. According to the report of the Turkish ministry of public instruction, the number of State schools in the whole Turkish Empire in 1913 was 3,500, with 245,000 pupils. In this number there were included 400 schools for girls, with 40,000 pupils. The total number of instructors was 6,900.

One of the chief difficulties encountered by the Turkish educators in their efforts at reform is found in the Arabic characters still in use in the Turkish language. The old Arabic script is very difficult to learn, and little children must waste several years of their most precious school age in barely learning to read and write. To offset this disadvantage, Turkish reformers have proposed to introduce the Latin characters, which are perfectly adaptable to the Turkish speech.

This reform has always found determined opponents in the Mohammedan teachers of writing (*softas*), whose economic interests are threatened by the proposed introduction of Latin characters. They exert a strong influence upon the common people, asserting that the Arabic characters are sacred, since they are the characters in which the Koran was written, and that the use of other characters would be an offense against the Mohammedan faith.¹

Besides the State schools, which are organized on modern principles, there are also in Turkey a number of old religious schools called *medressé*, in which the main subjects of instruction are reading and writing, the Koran, and arithmetic.

There are schools of intermediate grade for boys from 11 to 16 years of age. Training schools for teachers also exist, but their number is quite insufficient, especially in view of the new demand for teachers created by the recent extensions of public education.

The total number of Turkish schools of all descriptions in the Empire is 36,230, with 1,331,200 pupils, or 1 to every 24 persons in the population.

FOREIGN SCHOOLS.

The population of Turkey does not form a homogeneous whole, but comprises a number of different races and nationalities, among which the Turks themselves scarcely number two-thirds. The non-Turkish portion of the population may be divided into two groups: (1) Those nationalities that have been incorporated into the State organization, such as Arabs, Armenians, Greeks, Jews, etc.; and (2) Europeans and Americans who live in Turkey as foreign citizens and owe allegiance to their respective Governments. The legal status of the latter group is contested ground since the abrogation by Turkey in 1915 of the so-called *exterritorial rights*. None of the powers concerned acquiesced in this act, but representations that were about to take place were deferred owing to the entrance of Turkey into the European struggle shortly after the abrogation was declared.

Almost all foreign groups in Turkey maintain their own schools, partly for the education of children of their nationalities and partly as places of European education for higher classes of the indigenous Turkish population. These foreign schools play an important rôle, not only as agencies of foreign influences, but also as factors in the cultural progress of the Turkish people.

The Armenians have achieved notable success in their educational movement. Their school system already has a history of long devel-

¹ In this connection the fact that the Koran is not written in Turkish, but in Arabic, is of interest. There is at present no Turkish translation of the Koran, although an English and a German translation have been available for a long time. Some of the ardent Turkish reformers believe that the cause of the Latin script would be greatly promoted if the Koran were translated into Turkish and printed in Latin characters.

opment, and, while its methods are not quite modern, it is perfectly well adapted to the needs of the Armenian population. It is supported wholly by the Armenians themselves. In 1902 there were in Turkey (the city of Constantinople excepted) 800 Armenian schools, with 80,000 pupils and 2,100 teachers. Considering the number of Armenians in Turkey, which does not exceed 2,000,000, these figures show remarkable achievement in the educational field. The progress made by the Armenians is especially striking in the six Armenian vilayets, in which the Moslems form the majority of the population. In these the Armenians had, in 1902, 585 schools, with 52,000 pupils, while the number of Turkish schools was only 150, with 12,000 pupils.

The Greeks in Turkey, according to data published by the Association d'Orient in Athens, have built up an efficient system of education. They have in Asia Minor 728 schools, with 120,000 pupils and 2,200 teachers.

The Jewish schools in Palestine.—The number of Jews in Turkey was considerably decreased by the transfer of the greater part of Turkish territory in Europe to the several Balkan States in 1912-13. The present Jewish population in European Turkey is estimated at 80,000.

The educational activity among the Jews in Turkish dominions is centered in Palestine, where the Jewish population has recently reached 100,000. Education in Palestine is supported by a number of Jewish societies, notably the Zionist Societies, the Alliance Israélite, located at Paris, the Hilfsverein der deutschen Juden, and the Anglo-Jewish Association.

The schools of the Alliance Israelite are among the earliest Jewish schools in Palestine. In 1870 the alliance established an agricultural school near Jaffa. Between 1881 and 1906 it founded over a dozen schools in the cities of Jaffa, Jerusalem, Haifa, Safed, and Tiberias. The alliance has paid especial attention to training in handicrafts, and has founded a number of schools for this work.

The Hilfsverein, an organization of German Jews, founded in 1900, lays special stress on kindergartens, of which it has three in Jerusalem, three in Jaffa, and one each in Haifas, Safed, and Tiberias. It also maintains a teachers' seminary and a commercial school at Jerusalem and a number of schools for boys and girls.

The English Jews in 1880 founded a school under the name of Evalina de Rothschild.

The schools maintained by the three organizations named are modern, the language of instruction being determined in each case by that of the controlling body.

The Zionist Societies maintain an educational work which has attracted much attention. Their schools in Palestine are nationalistic and religious in character and employ the Hebrew as the language

of instruction. Notable among these are the "colony schools" scattered among the Jewish farming settlements. There are about 30 such schools, one in each settlement. Their program comprises the usual elementary subjects, as well as Arabic and in some settlements French.

The Jews in Palestine have also two gymnasia, one at Jaffa and one at Jerusalem, both with full secondary curricula. The certificates of the Jaffa gymnasium have been recognized by a number of universities in Europe.

The Bezalel School of Arts and Crafts is devoted to the cultivation of Jewish applied art. It gives instruction in carpet weaving, woodwork, and filigree work.

As regards the strictly foreign schools maintained by Europeans and Americans, there were at the outbreak of the war 1,400 schools of this kind, of which 600 were French, 500 English, 200 Italian, 60 Russian, and 25 German.

The German schools.—A statement in the "Neue Bahnen," March number, 1916, may be regarded as authoritative as regards the German schools in Turkey. It places the number of elementary schools in Turkish Armenia, with German language of instruction, at 32. These schools are conducted by the "Deutsche Hilfsbund für christliches Liebeswerk im Orient," which also maintains a teachers' seminary at Mesereh.

There is a German Oberrealschule at Constantinople, which has attached to it an elementary school, a girls' school, a kindergarten, and commercial courses. The school gives instruction to 1,000 pupils, of which number more than half are Turks, the remainder consisting of German, Austrian, and Swiss subjects.

There are also German real schools in Smyrna, Jerusalem, Aleppo, and Bagdad, and higher elementary schools in Eskeshir (mainly for railroad employees), Adrianople, Adana, and Haidah-Pasha.

The *French* schools, all closed by the Turkish authorities since the outbreak of the war, have played an important part in the establishment of French cultural influences in Turkey; the fact that the French language has become the second language of Turkish educated classes and has gained predominance in railway traffic, trade, and almost all civilized relations is largely due to the activities of these schools. They were maintained by Catholic orders, namely, the Capuchins and Dominicans in Armenia and North Syria, the Augustinians in Anatolia, and the Jesuits in Syria. The closing of these schools was a consequence of the wave of repressions which came in the wake of the abrogation of extraterritorial rights and was aggravated by the entrance of Turkey into the European war.

These repressions have also placed in danger the development of the American mission schools. According to the documents received

by the office of the American Board of Commissioners of Foreign Missions, new official regulations have been issued under date of September 2, 1915, dealing with foreign schools. They are summarized as follows:

Foreign communities, associations, and societies can not establish schools. Private individuals of foreign nationality may establish schools under the following regulations:

They must prove that the number of inhabitants of their nationality is sufficient to justify the opening of a school.

Only those foreigners are allowed to establish schools whose native countries accord Ottoman subjects the right to establish schools. The premises selected for the school must not be larger than is necessary for the accommodation of the pupils. They must be located at proper distance from other schools and places of worship of the communities, so that the noise can not reach them. Mixed boarding schools are prohibited, with the exception of kindergartens. The Turkish language, history, and geography are obligatory in all the schools; at least four hours a week in the lower grades and two hours in the higher grades must be devoted to the Turkish language. Ottoman history and geography may be taught in languages other than Turkish.

Schools established by Ottoman communities, associations, or individuals may not employ foreign directors or instructors without the authorization of the ministry of public instruction.

All private schools are to be inspected by local Turkish officials and sanitary inspectors.

No private school can be established without the permission of the Turkish authorities. A foreigner applying for the permission must state definitely the means of meeting the expenses of the school. Applications of foreigners may be rejected by the ministry without statement of the reasons therefor.

After obtaining the permit the founder must designate, in a communication to local authorities, the person responsible for the conduct of the school and the intended location of the school building. This communication must be in the form of a petition asking for the authorization to begin instruction. It must be accompanied by a detailed program of instruction and a copy of the school regulations; a list of textbooks to be used in the school; a list of professors, with detailed information concerning every person of the staff; a report of a physician and an architect in respect to sanitary and structural features of the school building, etc.

When the director of the school is a foreigner, the opinion of the local authorities is presented to the ministry, together with the documents named, and the final permit can not be issued before the ministry gives its approval.

In order to enlarge an existing school, an application must be made stating, among other points, by what means the additional constructions will be assured. No enlargements can be made without a permit.

The new regulations also specify the conditions upon which pupils shall be admitted, examinations held, and certificates and diplomas awarded. They also comprise certain prescriptions in respect to school discipline. All foreign schools are required to notify the local authorities of any extraordinary measures taken and to furnish regular statistical reports.

In respect to the foreign schools already established, the regulations contain the following provision:

Private schools belonging to foreigners or foreign associations or societies which have not complied with the provisions of the regulations promulgated as a result of the abolition of the capitulations must, besides appointing a director

or directress, within three months proceed to obtain a permit or have their "firmans"¹ registered. Otherwise these schools will be closed in conformity with article 129 of the General Regulations of Public Instruction and the provisions of the above law.

The execution of these regulations, as far as they apply to American schools, has been three times postponed since their issue, the last postponement being until September, 1916.

All the educational institutions of the hostile belligerent nations have been closed and their property confiscated, according to the report of Robert College for 1914-15.

AMERICAN COLLEGES.

In January, 1914, a conference of American colleges took place in Smyrna, which incidentally resulted in bringing together statistics relating to all American colleges in Turkey. The following particulars of this conference are derived from a report by Prof. Cass Arthur Reed, dean of the International College, Smyrna, Turkey.

The conference, originally planned for Beirut, in April, 1913, but postponed on account of unfavorable political conditions, was proposed by Constantinople College, at the suggestion of Miss Grace Dodge, of New York, one of its trustees. Invitations were sent to the eight American colleges holding charters, as follows: Robert College, Constantinople; Syrian Protestant College, Beirut; Central Turkey College, Aintab; Euphrates College, Harpout; Anatolia College, Marsovan; St. Paul's Institute, Tarsus; Constantinople College. Constantinople; International College, Smyrna.

The limitation of the conference to these colleges was primarily on the ground that they possessed charters. Each is controlled by a board of trustees duly incorporated in the United States and empowered to conduct an educational institution. Moreover, these eight colleges form a group of institutions having similar aims and common problems.

The questions discussed at the conference in Smyrna were primarily those having a direct bearing on the work of American colleges in Turkey. Among them were: The peculiar educational needs in Turkey; How can they best be served by the colleges; Religious life in the colleges; Ideal standardization of college curricula, courses, and degrees; Relation of the colleges to official standards; How far the American standards can influence the coming educational reform; The educational outlook of the Turkish Empire. These subjects were all treated in carefully prepared papers and discussed at length by the delegates.

¹A decree issued by the Sultan of Turkey and signed by one of his ministers, generally in the character of a grant, patent, or license.

The colleges represented at the conference and a large number of secondary schools in Turkey have all been founded, and are administered, as definitely Christian institutions. The donors whose generosity has made possible their equipment, support, and endowment, have been actuated by the desire to offer to the youth of the Levant opportunities for Christian education. The founders and the leaders, as a rule, have been officially connected with the missions of the American board.

The colleges are all organized on the same general plan, and offer preparatory and college courses leading to the bachelor's degree in eight or nine years. Robert College is now also offering graduate instruction in a well-equipped and strongly manned graduate school of engineering. The Syrian Protestant College has long had a number of professional schools, medicine, dentistry, commerce, pharmacy, and nursing.

The necessity of the student's giving a disproportionate amount of his time to language studies makes the satisfactory arrangement of the curriculum a difficult task. In the first place, every student must gain a mastery of English, the one common language, and the medium of instruction. French, perhaps still the most widely used European language in the Levant, though the use of English is on the increase, is also deemed necessary by most students. Then every student must have thorough training in both the modern and the classical forms of his native language, be it Turkish, Greek, Armenian, Arabic, or Bulgarian. Engineering students need German; those preparing for certain European and American universities must have Latin. In general, thorough proficiency in at least three languages is required of all candidates for graduation.

In addition to the languages, instruction is offered in the usual secondary and college subjects: Mathematics, history, literature, natural sciences, political science, and philosophy.

Increasingly the standards are approaching those of American colleges, and graduates of the colleges have frequently proved their right to graduate standing in the best American universities.

In all of the colleges a large percentage, and in some a large majority, of the students are boarders. General dormitories, with beds for 15 to 35 students are the rule, rather than private rooms or suites, as in the colleges in America. Experience has proved that a much greater degree of surveillance is necessary for students in Turkey than in America. Some of the colleges have gymnasiums equal to those of American colleges, with athletic work in charge of trained directors. The American colleges have done much to introduce athletics into native schools.

For many years there were few Moslem Turks in the American colleges. Since the constitution of 1908, however, a considerable number have enrolled, and their proportion is steadily increasing.

The future of the American colleges in Turkey would seem to be assured. Fifty years ago, when Robert and Syrian Protestant Colleges began their work, they were confessedly experiments. But the increase in the number of colleges and their enlarging constituency indicate that they are filling a real need in the Turkish Empire. Robert College, with permanent endowment funds approximating a million and three quarters dollars and real estate valued at nearly a million more, is as strong as many well-known colleges in America. Syrian Protestant College has a large plant and a substantial endowment. Constantinople and International Colleges, although without endowments, have demonstrated their ability to find friends able to supply them with splendid equipment and enlarged facilities, and their permanence seemed assured. The four colleges of the interior have small endowments but strong friends, who are determined that their work shall go on. Five of the colleges receive annual grants from the D. Willis James Fund for Higher Educational Work Abroad, administered by the American board, and all depend largely upon the tuitions paid by their students.

RECENT DEVELOPMENTS.

In 1913-14 *Robert College*, the oldest and the most renowned of the group, took possession of Anderson Hall and Henrietta Washburn Hall, the latest of the additions to its equipment, which were provided for by the extension scheme, involving half a million dollar, undertaken in 1910.

Constantinople College, the American college for girls, has moved from Scutari to the heights of Arnaoutkey, just below Robert College, where a splendid group of buildings costing approximately three quarters of a million dollars has been erected.

The International College at Smyrna celebrated on January 15, 1914, the formal inauguration of its new campus and buildings located at the suburb of Paradise, just south of the city of Smyrna. Originally the institution was located in the Basmahane quarter of Smyrna, where it reached the maximum size possible in such limited quarters. As a result of large gifts received in 1910-11 it was transferred to the new location, where it occupies three large buildings and nearly a dozen smaller buildings. The amount already expended by the college for new grounds and buildings exceeds \$150,000.

Syrian Protestant College, at Beirut, has opened West Hall, a great social-center building modeled after the association type in the United States.

Anatolia College, at Marsovan, boasts a new library building, and other interior colleges reported less extensive additions to their material equipment.

The expenditure for new buildings of nearly a million and a half dollars within a few years in a small group of American colleges in a foreign country is in itself a significant fact. But in addition to the material equipment which has been placed at the disposal of these colleges, each one has considerably increased its faculty and strengthened its work in view of the new conditions brought about by the political changes in the Turkish Empire.

According to advices received as this matter goes to press, Robert College and Constantinople College have continued their operations throughout the current year, notwithstanding the war.

The following table shows in detail the distribution of students in the eight American colleges, by departments, and their status in respect to boarding and nationalities:

Students of the American colleges in the Turkish Empire 1913-14.

(According to reports to the Smyrna conference.)

Institution, location, and date of foundation. ¹	Total.	College.	Preparatory.	Other departments.	Boarders.	Day scholars.	Armenians.	Greeks.	Turks.	Jews.	Bulgarians.	Others.
Syrian Protestant College, Beirut, 1864.....	951	235	408	² 308	665	286	90	61	1	71	2	726
Robert College, Constantinople, 1864, 1862.....	544	211	308	25	408	136	92	221	90	31	64	46
Euphrates College, Harput, 1874.....	459	166	293	147	222	384	585	.....	2	.....	.....	19
Anatolia College, Marsovan, 1894, 1886.....	400	168	232	.....	287	113	157	192	16	.....	.....	35
International College, Smyrna, 1903, 1891.....	400	250	150	.....	150	250	50	225	73	16	.....	36
Constantinople College, Constantinople, 1890, 1876.....	278	136	142	.....	196	82	76	54	55	17	44	21
Central Turkey College, Aintab, 1874, 1876.....	235	94	137	⁴ 4	103	128	222	.....	8	.....	.....	5
St. Paul's Institute, Tarsus, 1887.....	201	101	86	14	144	57	182	8	4	.....	.....	7
Total.....	3,468	1,361	1,756	351	.....	.....	.....	.....	.....	.....	.....	.....

¹ When two dates are given, one represents incorporation and the other when instruction began.

² Medical, 182; commerce, 57; pharmacy, 32; nurses, 20; dentistry, 17.

³ Includes Syrians, 519; Egyptians, 160; Persians, 29, etc.

⁴ Training class for nurses.

CHAPTER XXXV.

MODERN EDUCATION IN BRITISH INDIA AND CHINA.

BRITISH INDIA.

The series of annual reports on education in India, which was started in 1914, as noted in the last annual Report of the Commissioner of Education, has been continued by the publication of the second number of the series, issued from the central education office at Delhi during the current year. In the introduction to this report, which has been received as this matter goes to press, attention is called to the fact that it deals with the year in which the effects of the European war were already felt on education in India. Financial stringency interrupted the imperial grants for education, measures for repressing the alien influences in the Empire became necessary, and the ranks of those engaged in educational work were depleted. Notwithstanding these difficulties, progress is reported in respect to nearly every department of education, which is largely due to the increased activity of the provincial governments.

Among particulars of special interest brought out in this record is the increase in the number of girls attending public institutions; the establishment of a college for women in Madras, the third institution of that kind in the Presidency; the provision of a residence for women students attending King George's Medical College at Lucknow, in the United Provinces; and the increase in schools for instruction in domestic and feminine arts, especially in Burma. The Victoria School for Girls, in the Punjab, an outcome of private efforts, has been taken over by the Government and turned into a model institution in which the teaching of the lower classes is to proceed entirely on kindergarten and Montessori methods.

The seven years closing with March 31, 1914, were marked by an increase of 1,343,000 pupils in public primary schools for boys. During the current year the increase continued, though at a diminished rate.

In the province of secondary education the scheme of medical inspection of schools sanctioned for Bombay has been maintained. In Burma schools and pupils have been brought under the inspection

of officers of the medical or sanitary department, and a similar inspection has been carried out in two districts of the northwest frontier province. This is one of the most important extensions of the education service thus far attempted.

Attention should here be called to a change in the scope of the reports which makes it somewhat difficult to measure progress exactly. This change consists in excluding entirely from the tables statistics pertaining to schools in certain native states, so that the present volume deals exclusively with education in the British provinces.

The following table summarizes the statistics of public instruction for the year under review:

Statistical summary of colleges, schools, and scholars in British India at the end of the official year 1914-15.

Classes of institutions.	Institutions.			Scholars.		
	For males.	For females.	Total.	Male.	Female.	Total.
PUBLIC INSTRUCTION.						
University education:						
Arts colleges.....	136	11	147	41,441	406	41,847
Professional colleges.....	45	3	48	8,613	119	8,732
School education, general:						
Secondary schools.....	6,378	602	6,980	1,011,203	86,789	1,097,992
Primary schools.....	116,012	15,700	131,712	4,518,004	929,846	5,447,850
School education, special:						
Training schools.....	663	91	754	15,221	167,935	183,156
All other special schools.....	5,919	1,127	7,046	2,184	34,817	37,001
Total public.....	129,153	17,534	146,687	5,762,417	1,054,161	6,816,578
PRIVATE INSTITUTIONS.						
Advanced.....	2,569	18	2,587	53,651	2,018	55,669
Elementary.....	33,798	1,984	35,782	505,815	70,357	576,172
Total private.....	36,367	2,002	38,369	559,466	72,375	631,841
Grand total.....	165,520	19,536	185,056	6,321,883	1,126,536	7,448,419

The total male population of British India is 124,182,692, and the total female population 118,806,255. It appears, therefore, that the number of males under instruction in 1914-15 was 5 per cent of the total males, and the number of females under instruction was nine-tenths of 1 per cent of the total females. The enrollment in public institutions is 90 per cent of the total in all classes of institutions, and the enrollment in public primary schools is 73 per cent of the total enrollment.

Expenditure on public instruction.

Institution.	Direct expenditure.							Total indirect expenditure.
	University education.		School education, general.		School education, special.		Total direct expenditure.	
	Arts colleges.	Colleges for professional training.	Secondary schools.	Primary schools.	Training schools.	All other special schools.		
Institutions—	<i>Rupees.</i>	<i>Rupees.</i>	<i>Rupees.</i>	<i>Rupees.</i>	<i>Rupees.</i>	<i>Rupees.</i>	<i>Rupees.</i>	<i>Rupees.</i>
For males.....	6, 179, 834	2, 816, 515	24, 328, 049	23, 051, 184	2, 169, 111	3, 686, 975	62, 231, 668	38, 981, 983
For females.....	101, 418	18, 380	3, 461, 662	3, 607, 616	528, 128	239, 637	7, 956, 841	
Total.....	6, 281, 252	2, 834, 895	27, 789, 711	26, 658, 800	2, 697, 239	3, 926, 612	70, 188, 509	38, 981, 983

The total direct and indirect expenditure for public instruction, as shown in the foregoing tables, amounts to 109,170,492 rupees, equivalent to \$35,371,239 United States currency.

MODERN EDUCATION IN CHINA.

The spread of modern education in China continues, notwithstanding the political changes and foreign complications which have disturbed the country during the last year. From its enormous extent and population and the independence of the 18 Provinces in educational matters, it is difficult to form a comprehensive idea of the movement which is gradually substituting the ideals and methods of modern education for the system which it is destined to replace. The endeavor made by President Yuan to centralize the control of education has had the effect of calling together in Peking conferences of the chief education authorities in the different Provinces, and thus a degree of unity as regards the provincial administrations and the classification of schools has been secured. No general census of the school population and of the number of schools established in the several Provinces has been published, and, therefore, available reports deal with individual Provinces. Several reports of this character were summarized in the Report of the Commissioner of Education for 1915, and through the efforts of American consuls in China who have collected and sifted educational data relative to their respective consular districts, the survey comprised in the previous report can be somewhat extended.

Recent information has also been received relative to agencies that are having a powerful effect in exciting enthusiastic interest in the modern system and securing support for measures directed to the development of medical education and technical training, both of which concern the vital interests of the Republic.

GENERAL AGENCIES.

Chief among the agencies referred to is the Young Men's Christian Association, which is carrying on a work of propaganda in the most systematic manner. A national committee has been formed representing all the Young Men's Christian Associations of China. This committee, which has its headquarters at Shanghai, has established a lecture department organized in five divisions as follows: Education, science, visual instruction and science, health, and conservation. Each section is in charge of a secretary highly competent in his own specialties. The secretaries deliver lectures illustrated, as a rule, in the cities, and where the interest is sufficient they organize lecture institutes with the object of training selected men to become itinerant lecturers. By this means it is hoped in a short time to reach every part of this vast country. The character of this work is indicated in the following extracts from a report to the Commissioner of Education on the educational campaign carried on in Shanghai by Mr. David Z. T. Yui, executive of the education division.

This campaign was conducted under the joint auspices of the Educational Association of Kiangsu Province, the Shanghai Educational Association, and the Shanghai Young Men's Christian Association. Two objects were proposed, first, to stir up a real interest in education among the people in Shanghai, and second, to organize a committee which would conserve the interest and thereby promote some much needed reforms in the city. The three associations named issued invitations to different classes of people to come to the four lectures given on the afternoons of January 3, 4, and 5 of the current year, with the result that a total attendance of 1,050 was secured. Subsequent lectures given in different parts of the city increased this attendance by 1,390 persons, including officials, educators, and industrial and mercantile people. As to the effect of this campaign Mr. Yui says:

The Shanghai campaign is marked by two special features. The first is the fact that in addition to the great interest and appreciation shown, 107 of those who attended the lectures were so deeply moved and strongly convinced that they voluntarily communicated with the three associations under whose auspices the lectures were given, requesting that these lectures be extended to other cities in China and that some ways and means should be provided to conserve their results. Of the 107 communications, 52 were from educators and school-teachers, 33 from students, 4 from officials, and 18 from business men. The second feature is that the Kiangsu provincial government was so very much impressed by the usefulness and power of these lectures that plans were being formulated to request the Educational Association of Kiangsu Province and the lecture department to organize a lecturers' institute in Shanghai during the month of April this year. The object of the institute is to train about 30 men selected by the provincial government to become itinerant lecturers in Kiangsu.

About \$15,000 will be set aside by the Government for training these men, for equipping them with lecture apparatus, and for traveling and lecturing from district to district during 1916. The lecture department will be asked to take charge of the institute. Courses on educational principles, city educational systems and administration, social service, social psychology, physical education, public health, etc., will be conducted. Invitations will be issued to the Provinces of Chili, Shantung, and Chekiang also to send delegates to the institute. It is hoped that the proposed institute will be carried out and made a real success. The success of this year will doubtless inspire similar institutes to be held next year with delegates from perhaps a larger number of Provinces.

The close of the campaign was marked by a teachers' institute held in the University of Nanking under the direction of the Kiangsu primary school board. On this occasion Mr. Yui delivered a public address on present day educational problems in China and their solution, and also conducted a sectional conference. The total attendance was 635, mostly teachers. Campaigns have also been conducted by Mr. Yui at Tientsin, North Tungchow near Peking, and at Peking. Similar lecture itineraries have been undertaken by the executive secretaries of the other divisions and in every case with marked success.

The office is also indebted to Mr. David Z. T. Yui for an account of the third meeting on medical terminology which was held in the building of the Educational Association of Kiangsu Province on February 12, current. The 31 delegates present represented—

the China Medical Missionary Association, the Chinese National Medical Association, the Medical-Pharmaceutical Association of China, medical schools and colleges in Kiangsu, the Medical-Pharmaceutical College of Chekiang, the Army Medical Department of the General of Chekiang, at Hangchow, the Chekiang Hospital, the Army Hospital of Foochow, the Medical-Pharmaceutical Association of Hangchow, and the Educational Association of Kiangsu Province. A number of letters were received from Chinese medical men in different parts of the country, and also in Japan, regretting their inability to attend the meeting and offering their greetings and some helpful suggestions on the question of medical terminology.

These delegates reported the progress made by committees of their several associations appointed to standardize Chinese translations of medical terms with a view of securing the final recognition of the Chinese Government for terms sanctioned by the medical fraternity: As a result of the discussions before this body, important resolutions were adopted which provided, among other things, for the appointment of a special terminology committee with authority to call a conference during the coming summer, at which time it was hoped the first manuscript of terms on anatomy would be completed. It was decided also that the headquarters of the Educational Association of Kiangsu Province should be the office of the several medical associations united for this important work, and that the ministry of edu-

cation in Peking should be requested to send delegates to the forthcoming conference. Mr. Yui calls attention to the fact that—

the question of translating medical terms into Chinese has been very vexatious and difficult. There has been much confusion and misunderstanding, as different men used different translations for the same terms in medical science. Medical missionaries in China and the Chinese medical men of the new school realize the importance of obtaining the best Chinese for the medical terms, of standardizing them in a conference of medical associations in China, and of their being recognized and promulgated by the Chinese Government.

In his opinion the steps already taken in this direction give promise of thorough work and final success.

CLASSIFICATION OF SCHOOLS.

Modern schools in China are classified on the basis of control as Government schools, that is, established by the central, provincial, or local authorities; mission schools; and private schools. As regards their scope, these schools are classified as elementary, middle or high schools, special schools, i. e., agricultural, technical, etc., and higher institutions. The mission schools are the pioneer agencies in this work, and, as a rule, are at the present time the best equipped in respect to teachers, material aids, and effective organization. The mission schools also enjoy the confidence of the official authorities and endeavor, as a rule, to conform to all official requirements. This general statement is subject to modifications, as will be seen by particulars here given for individual provinces.

The American consul at Changsha, Mr. Nelson T. Johnson, has forwarded an important report on modern education in the Province of Hunan, from which the following information is derived:

The Province of Hunan comprises a population estimated at from eighteen to twenty millions of people, being sixth in this respect in the country. Educational facilities adequate for 10 per cent of the population would comprise accommodation for two million students and an army of 40,000 teachers. When the new schools began, it is estimated that there were not a score of well-trained and qualified teachers available. The lack of funds (an ever present difficulty in China) and the friction between old and new ideas which was particularly strong in this most conservative of the provinces presented almost insuperable obstacles to the new movement. In view of these early conditions the opinion is expressed that—

great strides have been made with the result that one now meets with schools on every hand. Temples and public buildings have been turned into school-houses to meet the growing demand for a modern education, and we find Chinese private schools, Government schools, and foreign mission schools all working harmoniously toward the same goal.

Changsha leads the province in education. Of the five normal schools, one is the high normal which prepares teachers for the middle schools. The other four prepare their students to fill vacancies as teachers in the primary schools, both lower and higher primary. Tuition is free. The Chang Tsuen Middle School is the largest, with average annual attendance of 1,200 students; tuition free to Hunanese. The High Technical School has an average annual attendance of from 800 to 900, the average age at entrance being 20 to 21 years. Its entrance requirements are high. It is fed from the graduates of the primary technical schools of the province. Subjects offered are civil engineering, architecture, railway and mining engineering, and chemistry; it has completely equipped laboratories. There are two commercial schools, with some 200 students each. In these schools most emphasis is laid on correspondence and bookkeeping. There is a railway school maintained by the Government with 600 students, a police school with 300 to 400 students. Girls' schools lay great stress upon teaching domestic industries and Chinese language.

The following table gives a general summary showing the state of education throughout the Province of Hunan for the school year 1912-13:

General summary, 1912-13.

	Male.	Female.
Total number schools all kinds.....	3,983	96
Total number students.....	198,700	25,606
Total number graduated.....	8,387	447
Number leaving school before end of terms.....	8,118	1,473
Number of deaths among students.....	443	33
Number of teachers.....	8,518	357
Number of employees.....	4,799	170
Income.....	¹ \$770,717	\$61,512
Expenditure.....	\$798,096	\$69,693
Value of school property.....	\$3,393,875	\$60,843

¹ Values are given in the Mexican dollar, value about 40 cents.

With the above figures may be compared the following meager statistics which were furnished to the Rev. Mr. Brownell Gage as covering the state of education throughout the province before and after the revolution, i. e., 1911.

Before the revolution:

Number of students.....	58,383
Number of teachers.....	3,879

After the revolution:

Number of students.....	95,456
Number of teachers.....	4,746
Number of students in lower and higher primary schools.....	77,542
Number of primary schools.....	2,385

The statistics for 1912-13 include three higher institutions maintained by the Central Government, having an enrollment of 2,257 students; 2,461 primary schools and 57 middle schools maintained

by the provincial government, enrolling, respectively, 139,225 pupils, including 17,135 girls, and 9,739 pupils, including 2,212 girls. To the foregoing information the report of the consul adds the following, contributed by Rev. Brownell Gage, of the Yale Mission at Changsha.

The Educational Directory of China for 1915 gives particulars relating to 14 Protestant missionary schools maintained at central points in the province. Four of these institutions, including the Yale College, are situated at Changsha. To this information the consul adds:

I have been unable to get complete figures covering schools maintained by the Catholic missions in this province. A member of the Franciscan mission has kindly furnished me with approximate statistics covering the schools maintained by that mission. He informs me that their mission has about 43 schools all told, with about 1,500 boys and 300 girls in attendance. They have no high schools; nor does the curriculum follow that prescribed by the Chinese board of education.

According to the statistics for 1912-13, the number of Chinese students in the modern schools of Hunan had reached a total of 204,306, or about one-tenth the number for whom such provision is needed.

The report from Hunan dwells upon the lack of proper textbooks as one of the chief obstacles to the spread of modern education in China. The efforts of the Government to supply this need are ably seconded by the Commercial Press (Ltd.), a Chinese publishing house, and the Chung Hwa Book Co., both located at Shanghai. These are said to be the only publishing houses supplying Chinese schools with textbooks in a large way. Mr. Fong Sec, the head of the English editorial department of the Commercial Press, on the subject of literal translations of foreign textbooks for use in China, says:

In general the period for literal translation is past. We are now doing more and more compiling and original work, for only in this way can we make our books adapted to the needs of the people. Enormous improvement has been made in the contents of Chinese school books since the revolution. Chinese education is taking a practical trend, and textbooks on such subjects as manual training, farming, domestic science, physical training, etc., are making their appearance. The present tendency is to put out books in simple and clear Chinese. Our writers now recognize the fact that students of to-day can not spare the necessary time to acquire a high literary style.

Under the regulations of the board of education the schools are only to use those textbooks which have received the approval of the board. The board of education does not issue textbooks, but it outlines the courses of study for different grades of schools, and the publishing houses endeavor to prepare their textbooks in conformity

with the regulations of the board. Many of the books of the Commercial Press have been approved of by the board.

The conditions described in the report from Hunan are fairly typical of what is going on in the other principal provinces. This appears from numerous similar reports received from American consuls at other centers in China. Without multiplying details, it will be of interest to consider in particular the more noted institutions described in these reports, together with reference to organizations that are moving for the closer coordination of the various agencies engaged in promoting modern education among the Chinese. It should be stated in this connection that all the schools here referred to are intended for natives of the country. Schools for the foreign population, which exist wherever needed, are private in character and do not come within the present consideration.

Shanghai is noted as the seat of several high-grade modern institutions, including St. John's University, Soochow University, the Shanghai Baptist College and Theological Seminary, all under private management, and two under Government control, namely, the Institute of Technology and the Nanyang College of Mining and Engineering.

St. John's University was incorporated in January, 1906, in the District of Columbia under an act of Congress, and by its charter is authorized to confer upon its graduates the degrees conferred by universities in the United States.

In 1914, by the terms of an agreement between the trustees of the Pennsylvania Medical School, formerly of Canton, China, and the trustees of St. John's University, Shanghai, the two schools were united under the title the Pennsylvania Medical School, being the medical department of St. John's University.

Universities of the United States generally admit graduates of St. John's University having the bachelor's degree into postgraduate and professional schools without examination. Those who have taken the course in the school of science have been admitted into the second or third year of technical schools (schools of mines; Sheffield Scientific School; Institute of Technology, Boston). It is hoped that the school of science of this institution will in time be developed into a well-equipped engineering school.

With regard to the Nanyang Railway and Mining College, a report received from the American consul at Shanghai, Mr. Thomas Sammon, says:

The college has been officially recognized by the board of communication at Peking, and therefore students graduated from our college have similar privileges as those from the Government institutes of this country. The college is practically a self-supported one, and it is run and managed by myself, with

employed assistants. We have fairly complete equipments necessary for the courses assigned, but we have no workshops for electricity and engine. The Shanghai municipal council, electricity department, and the management of the Shanghai-Nanking Railway have kindly granted concessions for our students to have practical experiments there when they take those subjects. With regard to qualifications and standards of our students, it has often been proved that they are equal in standard to those of the Government Institute of Technology, Shanghai, and the Tangshan Engineering College, Tientsin. Last fall a student from the sophomore year went to America. He successively passed the entrance examination and was admitted to join the sophomore year in the University of Colorado.

Fukien is a comparatively small province, population 8,560,000. The capital, Foochow, is the seat of seven important mission schools providing higher education. In this city the Chinese Government has established a technical institution which is intended to draw students from the entire province. The curriculum provides for six courses of study, as follows: Electrical, civil, and mechanical engineering, chemistry, ceramics, and metal working. Each of these courses is organized in three grades; primary (3 years), middle (3 years), and high (4 years). In the first two grades all instruction is in the Chinese language, excepting that the technical terms are expressed in English. In the higher grade courses the English language is used throughout. There are about 665 students in the school, which is supported partly by tuition fees and partly by Government grant. No foreign teachers are employed, but the majority of the teachers are graduates from universities or high schools. The equipment of scientific apparatus is quite complete.

Boone University, at Wuchang, Province of Hupeh, is maintained by the American Church Mission and is regarded as the leading institution in central China. It has an extensive campus, fine buildings, and admirable equipment for the work of the several departments. These include (1) the school of arts and sciences, (2) the school of theology, (3) the school of medicine, and (4) the school of Chinese language and literature. In addition there is a Boone preparatory school, which offers a course of six years to fit students for the university. The teaching faculty is as follows: School of arts and sciences, 10 foreigners; school of theology, 6 foreigners; school of medicine, 6 foreigners; and the school of Chinese language and literature, 10 Chinese. The teaching corps is made up of graduates of American universities and colleges or standard Chinese higher institutions of learning. The medical department has a practical union with the medical school of St. John's University, Shanghai, and the Harvard Medical School of the same city, by which the students study for two years at Wuchang and go to one of these institutions for more advanced work. The total number of students is 333, of whom 275 are in the school department.

The Canton Christian College is located at the commercial, literary, and official metropolis of south China in the Province of Kwangtung. The population of the province is 23,700,000 and of the city itself 1,500,000. This college antedates all efforts of the Chinese Government at providing modern education, and is also the first institution of its class established under mission auspices. Although it is the outcome of mission enterprise, it is nondenominational and depends for its support upon individuals who appreciate the opportunities that it offers for influencing the development of this part of China.

The institution is chartered under the regents of the University of the State of New York. It occupies a campus of 48 acres, on which six permanent buildings have already been erected, and possesses assets estimated at \$200,000 and a yearly budget of about \$25,000. It also enjoys the confidence of Chinese leaders, and its staff of instructors includes a large proportion of natives, many of them graduates of American colleges.

The college courses are comprised in four groups, each arranged for three years. These groups of studies, supplemented when necessary by a working knowledge of French and German, furnish an adequate foundation for graduate studies in universities of America and Europe. They presuppose the completion of studies of the college middle school or its equivalent.

The college has recently taken measures for the establishment of an agricultural department, in which effort it has received substantial assistance from the Pennsylvania State College Young Men's Christian Association. Elementary education in agriculture has been introduced in the preparatory school, and experimental gardens for observation and practice have been established on the college grounds. In regard to this development Dr. Edward A. Ross, of the University of Wisconsin, who personally investigated the college and its opportunities, says:

The proposed agricultural department in that noble institution, the Canton Christian College, may be of great service in bringing about, between our agriculture and that of China, a beneficial exchange of points of superiority. * * *

Nothing could be suggested more likely to convince the Chinese of our good will and to dispose them to listen to whatever we offer them in the way of moral or religious ideas.

In all departments, including the preparatory school, 200 students were registered in 1915.

Special interest attaches to the movement for providing medical training for young women which has already achieved definite results in Canton. The Hackett Medical College for Women, the

Turner Training School for Nurses, and the David Gregg Hospital for Women and Children are institutions owned by the board of foreign missions of the American Presbyterian Church and governed by the Presbyterian mission of south China. The president and treasurer of the institutions is Dr. Martha Hackett, a graduate of Western College and of the Rush Medical College. A large proportion of her colleagues are also graduates of colleges and medical schools of the United States. The work is in its infancy and was seriously interrupted during the current year by the warlike conditions, but in May, current, the scattered students returned to the medical college and resumed their routine work.

Among other institutions of special note must be mentioned Tsing Hua College, founded by the Government near Peking in 1909 with the proceeds of the Boxer indemnity claim, for the preparation of students to be sent at the Government's expense to America, and which, therefore, has larger representation in the higher institutions of the United States than any other college in China. In accordance with the original provision, 80 per cent of the students sent to complete their studies in this country must specialize in the industrial and technical arts.

Peiyang University, located at Tientsin, is the leading institution of learning in north China, and, like the Peking Government University, is under the direct control of the minister of education.

Union Medical College in Peking has been taken over by the China medical board of the Rockefeller Foundation with the object of making it the leading institution of this kind in north China.

In the Kiangsu Province modern education centers in three higher institutions, the University of Nanking, the Nanking School of Theology, and Ginling College.

The University of Nanking is regularly incorporated under the laws of the State of New York, with a board of trustees resident in the States. Its local affairs are in the hands of a board of managers residing in China. The university has a well-organized collegiate department. Its examinations are recognized by the University of the State of New York, and that institution confers the degree of A. B. upon all graduates of the academic department. There is also a normal school in connection with the university which aims to supply in part the lack of trained teachers in the lower schools to which reference was made in the preceding paragraphs. The medical department of the university, only recently begun, has an excellent staff of foreign instructors, with some able Chinese assistants. There are good facilities for clinical work, but the equipment, owing to lack of funds, leaves much to be desired. This will, however, be gradually remedied as a larger income becomes available. The ex-

aminations of the medical school are also to be recognized under the laws of the State of New York. The department of agriculture and forestry has been opened within the last three years. This course is designed to train men in the fundamentals of scientific agriculture and to give them such a knowledge of practical forestry as will be of service to them in the work of reforestation, which is so badly needed in China. It is significant of the quality of the work done in the university and of the confidence of the Government therein that the Bureau of Forestry has recently sent 40 of its students from Peking to Nanking to be trained there. Such cooperation is eloquent testimony to the friendly feeling now existing between Chinese and foreigners. In addition to its other activities the university carries on a language school for new missionaries in China. This school applies the latest methods of phonetics to the study of Chinese, with a noticeable increase in both the accuracy and fluency with which newcomers begin to speak the language.

For the academic year 1914-15 the university enrolled in all departments 507 students.

The following list includes universities and higher technical schools of China from which reports have recently been received at this office. In the Government scheme of classification, which is generally followed, the term university is applied to institutions that provide both academic and professional courses of study. The higher technical schools are all specialized. As a rule, the institutions are named from the cities in which they are located, and they have been taken in geographical order from Peking on the north to Hongkong on the south.

UNIVERSITIES.

Imperial University, Peking.
 University of Peking.
 Peiyang University, Tientsin.
 St. John's University, Shanghai.
 University of Nanking.
 Soochow University.
 Northwest China University, Sianfu.
 Boone University, Wuchang.
 Canton Christian College.
 Hongkong University.

TECHNICAL SCHOOLS.

Tangshan Engineering College.
 Institute of Technology, Shanghai.
 Nanyang Railway and Mining College.
 Hwai River Conservancy School.
 Fukien Technical School, Foochow.

CHINESE INDEMNITY STUDENTS.

According to the Chinese educational mission, there were 345 Chinese students in the United States in 1916 maintained from the indemnity fund. Colleges and universities enrolling 10 or more of these students were as follows: Cornell University, 27; Massachu-

setts Institute of Technology, 34; Columbia University, 34; University of Michigan, 14; Harvard University, 18; Yale University, 11; University of Illinois, 16; University of Pennsylvania, 15; and University of Chicago, 11. Four of the students were assigned to manufacturing companies. The remainder were scattered through 77 colleges and secondary schools. Of the total number of students, 25 entered preparatory schools, 35 took academic courses in universities, and 93 were entered for various branches of engineering. The remaining courses pursued by 10 or more students were as follows: Economics, 34; political science, 18; agriculture and chemistry, each 15; medicine and pharmacy, 14; education, 14; and law, 10.

CHAPTER XXXVI.

EDUCATION IN AUSTRALIA AND NEW ZEALAND.

EDUCATION IN STATES OF AUSTRALIA.

COMMON CHARACTERISTICS.

The formal inauguration of the Commonwealth of Australia took place January 1, 1901, coinciding with the opening of the twentieth century. By the terms of the federation the systems of public instruction already established in the several States remained under their individual direction. New South Wales, the first colony in which settlements were made, naturally took the lead in providing schools and higher institutions, and although it has not been more active or more progressive in this respect than the other States, its influence has been greater because of its priority in time, and the main features of its educational administration have been generally adopted.

In all the States the Government exercises large control over primary education, and the expenditures, as a rule, are met from the public treasury. The chief officer of education, who bears the title of minister or secretary, is represented in each State by inspectors appointed for special subjects or assigned to particular localities. Provision is made in South Australia for local representation by means of boards of advice or district committees, who make recommendations respecting the needs of their several communities. In Victoria the minister of education is assisted by an advisory council.

Completeness of school provision.—The classes of schools authorized by law in the different States indicate the widely different conditions to which the schools must be adjusted.

The typical school in all the States is called simply the public or State school. It must maintain a certain average enrollment and must be kept in session the full time. There are also provisional schools; that is, schools which may be kept open for the full time annually, but whose average enrollment is below the standard, and half-time schools in districts where the number of children is too small to justify the expense of a full-time school. In such cases a teacher is appointed for two or more districts and holds the school in each on alternate days or for a half session each day, according to

the distance to be traveled. House-to-house schools have also been recognized as a temporary expedient. The plan of conveying children at public expense from isolated districts to a central school has been recently adopted and is gradually superseding that of special and half-time schools.

Evening schools in several of the States and infant schools complete the public provision for popular education.

Compulsory attendance.—Attendance upon school is compulsory for all children of legal school age (this varies in the several States) unless they are educated privately or exempted by law.

Religious instruction.—The schools are nonsectarian, but religious instruction is provided for in New South Wales, Western Australia, Queensland, and Tasmania.

Extensions of public education.—The upward extension of the public schools is the most noticeable feature of recent activities. This is shown by the establishment of advanced classes termed "superior" or "intermediate," and also by the provision for free high schools giving complete secondary education. Until a comparatively recent date this work was left to private agencies that were subsidized.

Technical education is also fostered in all the States and technical schools or classes aided by public funds are found in all the chief cities.

The Australian universities have been extensively aided by legislative appropriations and the University of South Australia by grants of land. These institutions are authorized to confer the same degrees as the universities in England, with the exception of degrees in divinity, and women are admitted to all their privileges.

The progressive spirit of the education authorities is evident from the complete surveys of school population, the provision for practical training and recreative exercises, and the excellent systems of medical inspection maintained. The scope and character of these activities are indicated by the following statements drawn from current reports:

The latest statistics of the public schools of the several States are given in the comparative table in chapter 37 of this volume. The following statements relate to movements of special interest in the several States:

NEW SOUTH WALES.

EDUCATION ACTS.

The system of public instruction in New South Wales is founded upon an act of 1866, which became operative January, 1867. This act made provision for a council of education, in which was vested authority over all the financial resources, lands, and buildings avail-

able for that service and extensive powers respecting the establishment and conduct of schools. Full recognition was given to denominational schools, and special features, such as provisional, half-time schools, itinerant teachers, etc., that have been adopted in all the States, were provided for under this early act.

The public instruction act of 1880 transferred all the powers and authority of the council of education to a crown minister and provided for the abandonment of subsidies to denominational schools and the establishment of an undenominational system; attendance at school for a minimum period of 70 days in each half year was declared obligatory, and the following classes of schools were recognized: "Public schools, primary and superior; evening public schools; and high schools for girls and for boys; the conditions in regard to provisional schools and itinerant teachers, as contained in the Public Schools Act, 1866, were retained, but in amplified form."

The act of 1880 is in force at the present time, with amendments introduced by the free education act of 1906, which completed the effort to establish a system of public instruction up to the university standard.

In this centralized system the Government inspectors bear a very important part, and the service is not only well organized in South Wales, but has been distinguished by the marked ability of the incumbents. The chief inspector is assisted by a staff, the members of which are assigned to particular areas. There are, in addition, special inspectors for different branches of the service, as secondary schools, continuation schools, etc. The recently organized technical department is in charge of a superintendent who is at once the director and inspector of the service.

RECOMMENDATIONS OF THE ROYAL COMMISSION.

As the result of a conference on the part of the representatives of different educational interests in the State, held in 1902, a royal commission was appointed "to proceed to Europe and America and investigate the existing systems of education in the leading countries" with a view to such reforms and extensions of the system of New South Wales as might be deemed advisable. The recommendations of this commission led to a second conference, convened by the minister of public instruction in 1904, for the purpose of considering measures for the development of the system. The resolutions adopted by this conference involved—

the cessation of the pupil-teacher system, which had been operative in the public schools since 1852; the introduction of specially trained teachers, and for this purpose the equipment and maintenance of a normal school with a practice school attached; the formation of a kindergarten training college and of local training schools for country school teachers.

The establishment of a chair of pedagogy at the University of Sydney, of truant schools, and schools for the feeble-minded were also urged. The last decade has been marked by progress toward the full realization of the measures thus advised.

PRESENT CONDITIONS.

The latest report of the minister of education, issued in 1915, pertains to the operations of the previous year. The outstanding features of the educational work during that time were:

1. The remarkable increase in school population.
2. The extension of the scheme of school medical inspection to include traveling hospitals and clinics.
3. The continued expansion of secondary education.
4. The establishment of trade schools.

With regard to school population and school attendance, the report notes that there was an increase of 11,350 in the "mean average quarterly attendance" at the primary schools. Of this increase, 5,941 pupils, or 52.3 per cent of the total, were in attendance at "metropolitan" schools. This fact says the minister "furnishes concrete evidence in support of the contention that the urban population of the State is increasing out of all proportion to the settlement of rural districts." The same fact is indicated by the increased attendance at the larger country schools, which was equivalent to 41.5 per cent of the total increase. This leaves only the small number of 697 pupils as the increase in the country schools. With respect to this showing the minister says:

If such movement continues it must increase the staffs of existing schools with a corresponding reduction in the proportion of "one-teacher" schools. One result of this will be to make the problem of attracting men teachers to the service less necessary of solution, since women teachers may more easily be employed as assistant teachers than as teachers in charge of small schools.

The total attendance at all day schools during the year was 277,392 (144,670 boys, 132,722 girls). The total enrollment was equivalent to 14.4 per cent of the population.

The provision for universal education in this State is completed by a special school for girls who need restraint and control, and a similar school for boys. In both these institutions the most advanced ideas of remedial training are employed.

VOCATIONAL EDUCATION AND GUIDANCE.

As a result of the efforts to provide vocational training for young people who have just finished the primary grades, attention has been directed to the importance of guiding youth in the choice of a working career. For this purpose an investigation was conducted in 1914

with a view of finding out what boys and girls who had just left the primary schools were doing. The inquiry related to 9,705 boys and 8,364 girls, and with this information as a guide it was determined by the department to establish a boys' employment bureau in the interests of boys who had gained either the certificate of a superior public school or an evening continuation school. This restriction, it was hoped, would induce boys to prolong their training beyond the very elementary course as it would enable the department to certify that the applicant had reached a definite standard in stated subjects and something of the aptitudes that he had displayed in the vocational training. The chamber of commerce and the chamber of manufacturers cooperated in the effort, and it was intended to extend the service as rapidly as results justified that course and eventually to make similar provision for girls. The war has interfered somewhat with the progress of this helpful service.

MEDICAL INSPECTION.

The operations of the medical inspection service for the year 1914 were marked by great activity and added provision "for treating physically defective children in those parts of the State where it is difficult or impossible for the children to obtain treatment otherwise." With regard to the extent of the work, the principal medical officer says:

During the year 94,198 children were medically examined. This easily constitutes a record for Australia. Although these figures represent less than one-third of the children to be examined, about three-fourths of the State had to be traversed to reach them, *i. e.*, an area of considerably over 200,000 square miles. The labor entailed in covering this vast area of country will be realized from the fact that on one occasion a medical officer spent three days in getting from one school to another, and had to sleep out in the open two nights, while another medical officer, in the course of his inspections, traveled 7,370 miles in seven and-a-half months (*i. e.*, nearly 1,000 miles a month), and a half of this distance had to be traversed without the aid of a railway. The necessity for covering so much country during the year was due to the fact that it was decided to give precedence in the matter of inspection to the children living in the most remote and sparsely populated parts of the country. This was done mainly because it was recognized that these children, living, as they do in many cases, far from resident doctors and dentists, needed attention more urgently than those living in more favorably situated parts.

During the year the minister approved of the establishment of the following schemes for treating school children—

- (1) A traveling hospital;
- (2) A traveling ophthalmic clinic;
- (3) A dental clinic in Sydney;
- (4) A traveling dental clinic.

Of these schemes, two—the traveling hospital and the traveling ophthalmic clinic—were started during 1914, while arrangements were completed whereby

the metropolitan dental clinic and the traveling dental clinic would start at the beginning of 1915.

The results of the medical inspection for 1914 are summarized as follows:

All public schools inspected (exclusive of work performed by traveling hospital and ophthalmic clinic).

Total number of children examined.....	76, 323
Number of children notified as suffering from physical defects.....	46, 187
Percentage number of children found suffering from physical defects sufficiently serious to require notification.....	60. 5
Number of children subsequently treated.....	14, 096
Percentage number of children treated.....	30. 5

All private schools inspected (exclusive of work performed by traveling hospital and ophthalmic clinic).

Total number of children examined.....	15, 662
Number of children notified as suffering from physical defects.....	10, 173
Percentage number of children found suffering from physical defects sufficiently serious to require notification.....	64. 9
Number of children subsequently treated.....	1, 700
Percentage number of children treated.....	16. 7

To the numbers given above of children treated must be added those treated by the traveling hospital and traveling ophthalmic clinic, viz, 2,558.

In concluding his report, the chief medical officer calls attention to the fact that this work is a highly specialized branch of medicine and should be intrusted only to persons who have had special training in hygiene and kindred subjects. He observes with much satisfaction that the Sydney University has been one of the first, if not the first, in the world to establish a special course for the training of candidates for the school medical service. This branch of the university work was opened in the latter part of 1914.

PHYSICAL TRAINING.

The importance of physical training is fully recognized, and special schools of instruction in this matter are maintained in various country districts, and special classes are held at convenient centers to qualify teachers for conducting physical exercises in the schools. This work is promoted by athletic associations organized among the older pupils and those who have passed through the schools. The teaching of swimming is regarded as a part of the ordinary school program and is conducted under strict regulations for safeguarding the health and life of the pupils. The rural camp school, which has been in successful operation over nine years, was discontinued on account of the war, but it is intended to reopen the same in the future.

RELATION BETWEEN SECONDARY SCHOOLS AND THE TEACHERS' COLLEGE.

Until the year 1905 the teaching staff of the public schools was recruited by means of the pupil-teacher system. In that year a scheme was adopted under which prospective teachers received special training for their work after the completion of their own elementary instruction. Some delay was experienced in effecting this change. A general training school, however, was established at Sydney with a one-year course, and shortly after a second school of the same character was provided for. In 1912 the Teachers' College and Building Acts were passed, authorizing the construction and maintenance by the department of public instruction of a Teachers' College within the campus of the University of Sydney. This institution has since been completed.

When the high schools were reorganized in 1912, it was decided to make the school-leaving examination the standard of admission to the college. In this way the future teacher would pursue an uninterrupted course of four years' high-school work beyond the primary stage and then be eligible for the leaving examination which was accepted for admission to the Teachers' College. For the present, however, it has been found desirable to admit students who have only received the lower qualification of the intermediate certificate granted by the high school at the end of two years' study.

SCOPE OF THE TEACHERS' COLLEGE.

Students admitted from the high schools to the Teachers' College enter upon a two, three, or four years' course, according to circumstances, but it was found impossible to keep up in this way a sufficient supply of teachers for the rural schools, and therefore provision was made for short courses of training extending to 20 weeks or 6 months. By holding two such sessions each year the college is able to train about 230 candidates for the smaller schools. Students are not admitted to the short course under 18 years of age, but in fact the average age is much higher, as many have been engaged in teaching or other work before their admission. Under the present arrangements, therefore, the course of the Teachers' College comprises the following divisions:

- (1) Short course of 20 to 30 weeks. Prepares teacher for small rural schools.
- (2) One-year course, open only to university graduates in arts or science.
Prepares for secondary teaching, mainly in high schools.
- (3) Two-year course. Prepares either for infant or for primary-school work.
- (4) Third and fourth year courses. Allows of students completing the work for the arts or science degree, or of taking up some special group of subjects in order to qualify for superior public-school, continuation, or trade-school teaching.

QUEENSLAND.

INTRODUCTION.

The extension of public education in Queensland is exceedingly difficult, on account of certain characteristics of the country which are graphically set forth in the following statement:

Queensland contains 670,500 square miles, a total population of 683,500, a primary school population between the ages of 5 and 15 of 140,000. Some of the cattle and sheep holdings contain nearly 3,000 square miles each, and some of the schools are a journey of not less than two weeks from the departmental base. The size of Queensland will perhaps be better understood when it is realized that the area is more than five times that of the British Isles, and is nearly as large as Germany, France, and Austria-Hungary combined. * * * The extent of the territory involves much traveling on the part of some of the officials in the discharge of their duties; for example, the ophthalmic inspector travels annually about 7,000 miles by train, motor car, boat, and buggy.¹

SYSTEM OF PUBLIC INSTRUCTION.

Education was one of the earliest matters which received the consideration of the Government, and the education act of 1860 provided for a comprehensive system which was intended to bring all children within the same schools irrespective of social or denominational distinctions. For this purpose liberal aid was granted by the legislature for the establishment and upkeep of schools in local districts. The amount of grant increased from time to time, and finally the amended act of 1912 abolished the local contributions entirely and placed the entire cost of education upon the State.

The system developed under these favorable conditions is marked by the universally recognized elements of efficiency. School attendance is compulsory on every day upon which school is open. Efficient teachers are provided, and excellent school buildings. The most interesting features of the system, however, relate to expedients for reaching children in isolated districts who can not be brought to an organized school even by conveyance at public expense. This is accomplished by a "system of traveling teachers. Saturday schools, week-end schools, house-to-house schools, part-time schools, and camp schools."

TRAVELING TEACHERS.

With regard to traveling teachers, the publication considered says:

There are 17 traveling teachers at present, and the number will be increased as soon as possible. Each teacher is supplied with a specially designed buggy, four to six horses, and a complete camping-out equipment. He has also the services of a boy of from 14 to 18 years of age to attend to the horses, help to pitch the tent, light the fire, lower slip rails, open gates, and do the numerous

¹ State Education in Queensland, by J. D. Story, Under-Secretary of Education.

little things which a handy youth can do. The teacher is expected to make his own arrangements for camping and food, and thus relieve parents of this responsibility; he receives a special allowance from the department for the purpose. The motor car and motorcycle are also being tried as a quick means of locomotion; but, so far, owing to the nature of much of the country to be crossed—sandy tracts, heavy black-soil plains, timbered areas, hilly districts, treacherous billabongs, etc.—the motor car has not been an unqualified success particularly in the rainy seasons. The department is anxiously waiting the perfection of aeroplanes; the transit difficulties will then be reduced to a minimum, and sand and black soil and hills and torrential streams shall trouble us no more. * * *

The traveling teacher is the handy man of the service. He must be a good oushman, and he must be tactful, so as to gain the good will of parents and of owners whose lands he must cross. He should also be of kindly disposition, so as to win the confidence of shy bush children; should be of trustworthy character, for his work can seldom be inspected, as his duties take him to homes which are far away from the beaten tracks and which can often be reached only through lonely country patrolled by police in search of cattle duffers or of newchums who are lost; and, further, he must be a man of infinite resource, for he must be able to splice a broken pole, mend a wheel, doctor a sick horse, and, if threatened by fire or flood, be able to extricate himself and his boy and save His Majesty's property. It says much for the capabilities of the teachers—and perhaps a little for the department in its judicious selection of men—that during the whole period of the system not one life has been lost, and not one very serious accident has occurred (1901 to 1915). * * *

The traveling teacher is expected to visit each family in his district at least four times a year; he stays as long as possible at each visit; teaches the children; revises the work, written or otherwise, which has been done since his last visit; outlines the work which is to be done before his return; cheers; re-proves; and passes on. * * * Each teacher is provided with a plentiful supply of the departmental school papers and with a large number of school library books for boys and girls which the British publishers now produce; those papers are given and the books lent to the children and parents, and in this way a supply of cheap and wholesome literature is kept circulating through these lonely homes. Needless to say, the papers and books are read with avidity by all.

We do not pretend to produce university graduates under this system, but we are teaching these children to read, to write, and to count. And what a tower of strength the lads will be in the defense of their country. They can ride well, can shoot straight, are skilled in bush lore, can find their way in strange country as unerringly as a homing pigeon, and they know not fear.

In 1913 the number of families visited was 846, and the number of children instructed was 1,893; the cost per pupil instructed was £3 11s. 4d.

SPECIAL SCHOOLS.

The Saturday and week end schools, like the itinerant teachers, are a temporary expedient in the interests of small groups of from four to eight children living some miles from the nearest full-time schools. As the children are visited in this case once a week, their progress is naturally faster than those who depend entirely upon the itinerant teachers.

The camp schools are intended to meet the necessities of the children of men employed in the construction of the railways, which at the present time is vigorously pushed in Queensland. When the camp moves on, the portable school is packed on the railway truck and transported to the next stage and school work is resumed.

Wherever possible, children remote from the ordinary schools are conveyed to them at public expense.

VICTORIA.

PROBLEM OF SMALL SCHOOLS.

The latest report of the minister of public instruction discusses several problems of interest to the education authorities of all countries. Among these problems may be noted the status of small rural schools and the retardation of pupils. With regard to small schools in the Province the minister says:

Of the 2,174 day schools in operation, not fewer than 732 are maintained for an average attendance of 20 pupils or less. The expenditure per pupil in small schools is thus very heavy, amounting, in some cases, to as much as £11 (\$55) per child for expenses of instruction alone. Women head teachers of the sixth, or lowest, class are now receiving salaries from £110 (\$550) minimum to £130 (\$650) maximum per annum; and men teachers of this class salaries from £120 (\$600) minimum to £200 (\$1,000) maximum. This heavy expenditure is, however, an inevitable accompaniment of educational work in a new country, and the community as a whole will not grudge any reasonable expense incurred in bringing to the doors of pioneer settlers in the remoter parts of the State adequate educational facilities for their children. One of the best results of a centralized system of national education is shown in the provision of good schools for sparsely settled districts, districts which under a system of local taxation and control would probably be unable to provide schooling of the same character.

DISTRIBUTION OF PUPILS BY GRADE.

The primary schools of Victoria are classified in eight grades, each grade corresponding to one year. As the period of compulsory school attendance covers the ages 6 to 14, inclusive, it is easy to determine the age for each grade. This system of classification, authorized by the education act of 1910, has been fully carried out and furnishes a basis for a study of grade enrollment as compared with age, which is believed to be the only attempt thus far to determine the facts for a complete system of elementary education. The data for the year 1915 are comprised in an age-grade table, from which it appears that of the total pupils, 185,108, there were in normal classification 63.9 per cent; in subnormal classification, 22.2 per cent. The remainder, 13.8 per cent, comprised the brighter children whose classification was above normal.

RETARDATION OF PUPILS.

The analysis of the age-grade statistics brings into clear view the facts with reference to retardation, a subject which is attracting attention throughout the world. The results of the analysis are summarized in the report as follows:

If the column for children aged 10 years is taken, we find that, of the 21,457 of this age, 4,515 are retarded, 15,330 are of normal classification, and 1,612 are above normal classification. The retardation of pupils of this age amounts to 21 per cent. Similarly, the retardation of children aged 11 years amounts to 29 per cent. At 12 years the retardation amounts to 42 per cent, and at 13 years to nearly 57 per cent.

Briefly the following information is afforded by the table:

- (a) That 22.2 per cent, or more than one-fifth of the total number of the pupils in attendance at the elementary schools in 1914, were below the normal classification. This percentage indicates the amount of retardation; that is, the number of old and backward pupils in early grades.
- (b) That the age range in every grade, especially in Grades I, II, and III, is very wide. The probability is that the old children in these grades are distinctly subnormal in intelligence.
- (c) That there is steady increase in the rate of retardation, reaching a maximum in Grade VI.
- (d) That only 10 per cent of the total enrollment of pupils for 1914 was in Grade VII and Grade VIII combined. It must, however, be noted that at least 5,000 pupils who would otherwise have been in those grades have transferred to high schools, junior technical schools, registered schools, and other educational institutions, and that the majority of those who were exempted from the compulsory provisions of the act by the minister on account of the poverty of their parents would also have been in Grades VII or VIII had they remained at school until they were 14 years of age. Including the enrollment of Grade VI with that of Grades VII and VIII combined, we find that 78 per cent of the enrollment was in the first five grades. The enrollment in Grade I was 21 per cent, and in Grade II 12 per cent of the total. The high percentage of enrollment in Grade I indicates that many pupils repeated the grade; that is, spent a second year in it. The comparatively low percentage in Grade II is partly accounted for by the fact that many pupils were detained too long in Grade I, and did not, on promotion, pass into Grade II, but were transferred to Grade III.
- (e) Although, as stated under (c) above, there is a steady increase in the rate of retardation, reaching a maximum in Grade VI, the retardation for children two or more years below the normal classification for their age reaches a maximum in Grades IV and V. These results are in general agreement with the conclusions of the medical officers and strengthen the view they have urged that physical defects become most apparent in the grades mentioned, and those which are remediable—for example, defective vision—are either remedied before the children pass on to the higher grades, or these backward children are eliminated from school without reaching the higher grades.

- (f) The rate of retardation for children 10 years of age and upward is very significant, and is only partly accounted for by the fact that many bright children leave the elementary school and enter the high school at about the age of 12 years. The figures show conclusively that the lower and middle grades are congested, and that only a comparatively small percentage of the children in attendance at the elementary schools have any hope of reaching the highest grade before they leave.

Of the entire number of children enrolled, 3,590, or nearly 2 per cent, were three or more years behind the normal age classification. With respect to this class the report says:

This excessive retardation reaches its maximum in Grades IV and V. Exclusive of these, there were 9,828 children, or over 5½ per cent, two years behind the normal classification for their age. These cases also reach a maximum in Grades IV and V.

Of the children who are three or more years behind the normal classification for their age, the majority are probably mentally defective. Those who are two years behind may be classed as very backward, and those one year behind as backward.

The measures employed to discover the extent of retardation in each school with a view to its reduction are as follows:

Twice each year, the head teacher of every school in the State fills in a return very similar to the table showing the distribution of the enrollment. The two returns show the distribution, in January and July of each year, of the pupils in the grades of the school according to age. At the foot of each return, the head teacher classifies the cause of retardation under the following heads:

- (a) Commencing school life late, namely, after 6 years of age.
- (b) Irregular attendance of pupil.
- (c) Dullness of pupil.
- (d) Physical incapacity of pupil, due to delicate health, overwork at home, dairying operations, selling papers, long walks to and from school, etc.
- (e) Transfer of pupils from school to school.
- (f) Slow progress through any grade or section of the school.
- (g) The absence of any system providing for promotions at other than yearly intervals.
- (h) Crowded state of the schoolrooms, disturbance of school staff, or other unfavorable conditions.

When the inspector visits a school during the second half of the year he discusses with the teacher the extent of the retardation and its causes, and advises upon the adoption of suitable measures to reduce retardation to a minimum. From returns received during the second half of 1914, it was apparent that many teachers are making earnest effort to expedite the progress of old and backward pupils. In their zeal, some of these teachers have, however, fallen into the error of over classification, and, in some cases, the improvement has been only apparent. The amount of retardation in the schools is of gradual accumulation, and can not be remedied immediately. It can never wholly disappear, for in only the ideal school can it be supposed that children will all begin school not later than six years of age, that all will attend regularly, that the physical and mental ability of all will be the same, and that all

factors making for retardation will cease to act. Still, much can be done to lessen the amount of retardation, and, in order to deal with the causes so far as they can be dealt with in the schools, a committee was appointed in 1913 to report, with recommendations, upon the organization of the larger elementary schools. The committee consisted of two senior inspectors and seven teachers nominated at a largely attended meeting of metropolitan head teachers and senior assistants. Having made a close investigation of systems of organization in operation in several schools throughout the State, the committee adopted a series of recommendations. These recommendations were discussed in detail at two large meetings of metropolitan teachers. Although there were differences of opinion upon minor matters, it was clear that the committee's report reflected the general opinion of the teachers present.

The recommendations of the committee were made the basis of a circular of information which was issued for the guidance of teachers in August, 1914.

Among other matters, the following important questions of school organization were discussed at some length in the circular of information:

1. An allotment of duties and responsibility among the assistants, proportionate to their classification, skill, and experience.
2. Cooperation of effort on the part of the head teacher and assistants, so that their full teaching strength might be brought to bear upon the work of the school as a whole.
3. The adoption of a method of closer grading (within the grade or class) and provision at regular intervals for the free promotion to a higher grade of pupils who failed to secure promotion at the end of the school year.
4. Some special provision to meet the needs of retarded pupils.
5. Continuity of organization to provide for the systematic development of the teaching of each subject.

The causes of retardation external to the school present special difficulties, which can not be corrected by the school authorities alone, although they may contribute in various ways to reduce them. These causes as classified in the report are:

- (a) Commencing school life late; that is, after 6 years of age.
- (b) Irregularity in attendance of pupils.
- (c) Dullness of pupils.
- (d) Physical incapacity of pupils, due to delicate health, overwork at home, dairying operations, selling papers, etc.
- (e) Transfer of pupils from school to school.

The causes marked (c) and (d) are closely related to the problem of the social welfare of the children, and therefore are matters of particular concern to the medical inspectors. Experience shows that the advice of these experts is often followed by parents, especially when the backwardness of the children is attributed to underfeeding or overwork. It is stated, however, that a very large percentage of the parents—about one-third—remain indifferent to the advice thus freely given.

It is an encouraging fact that nearly 78 per cent of all the children enrolled in the public schools of Victoria in 1914 were either in normal or above normal classification. The minister calls attention to

this fact as indicating that the requirements of the course of study are reasonable and well adapted to the majority of the pupils. He recognizes, however, that there should be adaptation of the school programs to the needs of backward children, and advises in their interests that there should be "greater elasticity in organization, the segregation into special classes of the backward pupils, and a modified curriculum giving prominence to manual work."

COMPULSORY SCHOOL ATTENDANCE.

In connection with the study of retardation, attention is called in the report of the minister to the compulsory clause of the education act of 1910, which is much more stringent than that of the act it displaced. It requires "that every child must, unless there is a reasonable excuse, attend school during each meeting that the school is held. In order to obviate hardship, truant officers have been instructed to exercise care and tact in dealing with cases of nonattendance." The number of prosecutions during 1915 was 7,480 and the number of convictions obtained 6,339.

The statistics of average attendance offer satisfactory proof of the effect of this law. The ratio of average attendance to enrollment reached $73\frac{6}{10}$ per cent, the highest ever recorded.

SOUTH AUSTRALIA AND WESTERN AUSTRALIA.

South Australia and Western Australia have been specially active in bringing high-school opportunities within the reach of children outside the urban centers. In South Australia 24 district high schools, including the one at Adelaide, were in operation in 1914; these schools enrolled 2,569 pupils and employed 90 teachers. The high school at Adelaide was attended by 749 pupils, or more than one-third of the total, and had a staff of 27 teachers, a little less than one-third the total high-school teachers. Of the entire enrollment at the Adelaide school, 161 were junior teachers, 209 were studying for the university public examinations, and 115 were entered in the commercial course. The high schools throughout this State have become an important source for the recruitment of the teaching service. Three of the district high schools serve as domestic-science centers in which girls from either the primary or high-school grade receive special instruction, and also teachers who are fitting themselves for this branch. The most important of these centers is at Norwood, which by arrangements with the school of mines is able to offer unusual facilities for instruction in chemistry.

A school for mothers is maintained at Norwood, which cooperates also with the domestic-science center in maintaining an infant-care course for the pupils of the latter.

In Western Australia the experiment of a modern or nonclassical high school was started at Perth in 1911. Pupils are admitted at about the age of 13 years; the first two years of the course are common to all pupils, but in the last two years specialization takes place according to the requirements of the students. Parallel courses are maintained for teachers, agriculturists, and those who look forward to scientific or business careers. Provision is also made for teaching domestic economy to girls. The school at present provides for 400 pupils. Continuation classes are held at many centers in different parts of the State. These provide free tuition for pupils who have passed the upper limit of compulsory school attendance, namely, 14 years. Admission to the classes is free, but pupils must attend at least three evenings in a week.

MILITARY TRAINING.

In accordance with the system of military defense for the Commonwealth of Australia, regulated by Defense Acts of 1903 and subsequent acts, universal military training was established in 1910 for all the male population 18 to 20 years of age.

Youths from 12 to 14 years of age are trained in junior cadet corps for a period of 90 hours annually; youths from 14 to 18 years of age, in senior cadet corps 64 hours annually. The following statistics relate to the training of cadets from the period October 1, 1911, to December 31, 1913:

Instruction of teachers:

Number of courses.....	169
Number of teachers qualified.....	4, 103

Junior cadets:

Number of schools giving training.....	8, 044
Number trained	53, 850

Senior cadets trained	85, 110
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It is of interest to note that of 72,387 junior cadets medically examined only 2.3 per cent were found unfit for the training; of 123,469 senior cadets examined, 11.5 per cent were medically unfit. In 1913, in response to requests by the education departments of the several States, a special course of instruction for women teachers was held in order that they in turn might be prepared to extend the system of physical training to girls. In these classes lectures on anatomy and first aid were given by medical officers.

TECHNICAL EDUCATION.

Provision for technical education in Australia was started by private efforts, which resulted in the establishment of a mining school at Ballarat, Victoria, in 1870. An effort to organize technical

education was made in New South Wales in 1883 by the appointment of a technical education board. After six years' operation the board was dissolved and its functions transferred to the public-instruction department. Technical classes were started at Sydney, and these developed into the technical college which was opened for the reception of students early in 1892, and is at present a highly developed and comprehensive technical institution.

Measures were adopted in 1914 for coordinating the various agencies for technical education throughout the State. The trade schools, of which several had been established, were made the subject of strict regulations as regards the conditions of admission, and close relations were established between them and outside shops, so that boys in the trade schools may get practical acquaintance with the conditions of work while they are studying. At the same time the trade schools were linked up to the technical college, and this in turn was brought into relation with the university by the acceptance on the part of the latter of the diploma course in science and engineering at the technical college. There is, therefore, now complete coordination between the primary school, the trade school, the technical college, and Sydney University.

The example of New South Wales in centralizing the control of technical schools was followed by Queensland in 1905, in which year the interest was vested in the education department. According to current reports, this State has 16 technical colleges, of which 3 are under the direct control of the department, the remainder being managed by committees under central supervision.

As a result of the report of the royal commission on technical education appointed by the Government of Victoria in 1899, measures were taken to organize technical schools in that State, under the local councils, which receive grants for that purpose from the education department. By the education act of 1910, provision was made for placing such schools under departmental control. Agricultural and district high schools have been established which are intended to form a link between the ordinary public schools and the technical schools. Of the latter, 20 receive State aid. Three of these schools afford instruction in science, art, and trade; five of the number confine their teaching to art, and the remainder specialize chiefly in trade subjects. The largest technical institution in Victoria is the Workmen's College, at Melbourne, founded in 1887. This college, in addition to giving instruction in a large number of technical subjects, is also a school of mines.

South Australia has an important school of mines and industries founded in 1889 at Adelaide. There are similar schools at four other centers. In this State, while the Government bears the bulk of the

cost of maintenance, the organization and conduct of the technical schools are left to local councils. This arrangement is not satisfactory, and there is general support for the proposition to bring all schools of this class under one central authority.

Western Australia has a special director of technical education. The most important institution under his charge is the technical school which was opened at Perth in 1900 and which has been recently enlarged and remodeled. Branch institutions have been established at 14 other centers, all of which are under the control of the education department, as is also the school of mines, at Kalgoorlie. The Perth school gives the full course required by the University of Adelaide for the degree of bachelor of science.

The most important technical institution in Tasmania is the school of mines and metallurgy at Zeehan, which is affiliated to the University of Tasmania. There are also three other schools of mining and metallurgy, all under the control of the education department.

UNIVERSITIES.

The following survey of the universities of Australia is derived from a recent official statement:¹

University education in Australia has followed the lines of British development. The State universities of to-day resemble in many respects the great English provincial Universities of Manchester and Birmingham. The degrees are, by royal letters patent, declared of equal status with those of any other university in the Empire. There are no tests of any kind, save those of merit and capacity. They are secular, in so far as no instruction in theology is given or theological degrees granted. Women students are admitted and can proceed to degrees. They are all national universities, in great measure supported by Parliamentary grants, and the State is represented, directly and indirectly, on the governing councils.

The six Australian universities vary considerably in size, financial endowment, and complexity of organization. Sydney (founded 1850) and Melbourne (1853) are the oldest and largest. In the years in which these universities began operations the respective State populations were only 266,900 and 347,307. When the University of South Australia began work in 1876 the State population was slightly over 210,000. The estimated population of Tasmania in 1890, when the university was founded, was only 144,787. The two remaining universities were not founded until within the last year or two. Queensland University was formally opened in 1911; State population, 622,129. The University of Western Australia began work a year later: State population (1911), 294,181. The delay in the establishment of universities in the northern and western States was due in the latter case to slow national development (the population of Western Australia in 1890 was still under 50,000); in the former case to a prolonged period of financial depression.

¹ Federal Handbook, prepared in connection with the eighty-fourth meeting of the British Association for the Advancement of Science, held in Australia, August, 1914.

The organization of the universities is on familiar British lines. The governing body is a small senate or council, with over 20 members. A general council (corresponding to convocation) is, in the older universities, composed of graduates only, but in the new Universities of Queensland and Western Australia it contains representatives of the national, industrial, commercial, and scientific interests, and also donors of sums over £100. The general council in some cases has only a deliberative function, in others it has powers of revising university legislation. In the constitution of Sydney University, the university is declared to consist as a corporation of the senate. The wider point of view appears in the constitution of the University of Queensland, which is declared to be "a body corporate consisting of senate, council, and graduate and undergraduate members."

Most of the professorships are held by graduates of English and Scottish Universities, but a considerable number of the professors and the great majority of the members of the junior staffs are Australian graduates. Many Australian graduates have afterwards obtained distinction at English, German, and American universities as postgraduate students, lecturers, and professors.

Unlike the State universities of the United States, the Australian universities do not provide entirely free education. In various ways, however, the fees are reduced in the case of promising students of limited resources. New South Wales took advanced position in this respect by the university amendment act of 1912, which increased the resource of the institution as follows:

The statutory endowment of the university was doubled, and it was further provided that when the population returns of the State involve an increase in the number of exhibitions granted for free university education (one exhibition for every 500 persons between the ages of 17 and 20) the endowment "shall be increased at the rate of £1 for every 15 persons of such increase." When the new scheme of State university exhibitions is in operation, there may be 800 students in attendance at Sydney University who pay no fees. These State exhibitions are not like other university exhibitions, tenable only in the faculties of arts and pure science. They may be held in any professional school, in a proportion to be determined each year by the senate of the university. The government of New South Wales has thus given effect to what has for long been an educational ideal in Great Britain and Australia—the ideal of a system which shall form a progressive and continuous whole, from the primary, through the secondary schools, to the technical colleges and the university.

At Sydney and Melbourne there are affiliated residential colleges within the university grounds. These colleges, while admitting students without respect to religious creed, are connected with religious denominations. Their students are admitted for the university degrees. Evening lectures are provided at several of the universities for students who are unable to attend during the day; the new universities of Queensland and Western Australia propose to make special arrangements for such students.

University Statistics, 1912 and 1913.¹

Universities.	Number of professors and lecturers.	Number of students.	Income.
University of Sydney (New South Wales).....	134 1 (130)	1,645 (1,495)	\$442,046.16 (459,538.40)
University of Melbourne (Victoria).....	82 (82)	1,256 (1,221)	373,301.46 (372,902.94)
University of Adelaide (South Australia).....	49 (47)	720 (697)	140,648.40 (212,600.70)
University of Tasmania.....	11 (10)	162 (130)	41,970.96 (34,923.96)
University of Queensland.....	23 (21)	207 (219)	89,424.00 (90,974.34)

¹ The figures in parentheses are for 1912.

The University of Western Australia, the latest established, will receive from Government an annual grant of £13,500 (\$65,610). According to report, it began operations in the fall session of 1913, and reported for that year 8 professors, 4 lecturers, and 182 students, of whom 64 were nonmatriculated.

EDUCATION IN NEW ZEALAND.

STATUS IN 1915.

The office has received from Dr. Mark Cohen an article on education in New Zealand, comprising a summary of the latest official report with interesting comments.¹ From this article the following particulars are derived:

The progressive spirit characteristic of New Zealand led in 1912 to the appointment of a royal commission on education charged to investigate the system and suggest measures for its development and better adaptation to the expanding country. The change in the administration of the country interfered with immediate action in accordance with the recommendations of the commission; and the European war, which makes a heavy drain on the financial resources of New Zealand, precludes serious consideration at the present time of schemes that may involve increased expenditure of public money. Notwithstanding these adverse conditions, certain of the recommendations have recently gone into effect. Among these are the appointment of a council of education to act in an advisory capacity to the minister of education. The first meeting of this council was held in July, 1915, and considered subjects of immediate importance for the improvement of public education, including agricultural education; the conduct of secondary education, especially that of public

¹ Dr. Cohen, the editor of the Dunedin Evening Star, New Zealand, represented his country at the International Congress on Education held at Oakland in July the current year. He has long been identified with the educational work of New Zealand, and for many years this office has been indebted to him for information not otherwise attainable.

high schools; standards for admission to the university; and medical inspection for school children.

At a second meeting of the council, held in November, further consideration was given to the questions of medical inspection, physical training, and increased provision for free tuition in secondary schools, which are paramount matters at the present time. Other measures adopted in accordance with the advice of the royal commission are the reorganization of the school districts, reducing the number from 13 to 9, and the transference of the control of the official inspectors from local education boards to the central department. A scheme for the grading of teachers was also adopted, but is not yet in full operation; hence its merits have still to be tested.

The statistics of primary education show that for the year ending December 31, 1915, enrollment in the primary schools was 181,192 pupils. Of these, 160,895 were in public schools, 14,366 in registered private schools, 4,745 in schools for the natives, and 731 in schools for special classes. The teaching forces of these schools numbered 1,591 men and 3,077 women, not including 626 assistants.

An impressive fact in the statistical record is the high percentage of average attendance maintained. The status of New Zealand in this respect, as compared with other countries, appears as follows:

	Per cent of enrolled pupils in average attendance.
New Zealand.....	90.0
England.....	88.7
United States.....	¹ 73.2
Queensland.....	¹ 77.0
New South Wales.....	80.9
Victoria.....	¹ 73.7
South Australia.....	¹ 75.8
Western Australia.....	87.4
Tasmania.....	80.9

The satisfactory showing for New Zealand is attributed to the strict enforcement of the compulsory-attendance law, but more particularly to the increased appreciation on the part of parents of the value of education for their children, and the improved conditions of the schools which make them so attractive that the children have no desire to be absent.

The official report considers in particular the status of small schools which, as will be seen by the following statistics, comprise about two-thirds of the total number:

Number of schools.....	2,338
Number having two or more teachers.....	932
Number having one teacher only.....	1,405

¹ Based on average daily attendance as proportion of net enrollment, or number of district children on rolls during the year.

Of the schools with one teacher, 992 averaged less than 20 pupils. The difficulty presented by this class of schools is continually before the department, and the example of the United States is cited in favor of consolidation. With respect to this subject the minister says:

Small schools should be grouped wherever possible. Instead of setting up small, ineffective schools, generally under untrained, uncertificated teachers, there should be central schools well equipped and staffed, where inspectors give more than double the time they now find possible. * * * If any one board would make one experiment in this direction, its success, guaranteed by experience elsewhere, would be sufficient to cause a widespread adoption of the system. The children would benefit not only educationally but physically, owing to the method of traveling in covered conveyances in bad weather.¹

During the past year there was a steady increase in the number of female teachers, due to a large extent to the enlistment of male teachers for military service abroad. At the close of the year 1915 over 400 adult teachers were serving with the colors, their places being temporarily filled by women. As a consequence the proportion of women teachers was greatly increased. In 1914 there were 173 women to every 100 men teachers; in 1915 there were 193 to 100. Under normal conditions, however, it is said that the supply of male teachers in New Zealand is satisfactory and compares favorably with similar conditions in other countries. In view of the fact that about half the children in the public schools are under 10 years of age, it is considered that women teachers are the most suitable for about three-quarters of the school population, and there is no present apprehension as to future proportions in the school staffing.

The salaries are comparatively high and have been considerably increased as a result of changes in the staffing provided for by legislation of 1914. The total amount appropriated for salaries during the past year was £846,810 (about \$1,200,000). This was an increase of £105,674 above the appropriations for 1914. At present the average annual salary for male teachers amounts to £245 (\$1,190.70), and for women teachers to £141 (\$685.26).

Because of the demands of war, the increase in the number of certificated teachers noticeable in recent years was not maintained. Only 16 teachers of this class were added during the year, and the number of teachers partially qualified was reduced from 73.7 per cent to 70.6 per cent of the total force, with a corresponding increase in the proportion of teachers having no recognized status. Regret is expressed that under present circumstances it has become necessary in many districts to appoint any fairly well-educated person as school-teacher.

An interesting fact in the educational record of New Zealand is the continued maintenance of schools for the natives. It is stated

¹ Report of the Minister of Education, 1915, p. 3.

for the year under review that there were 117 Maori schools in operation, 3 primary mission schools for Maoris, and 10 boarding schools affording advanced education to aboriginal children, who also attend 551 public schools, where they pass the standards in just the same way as European children. The average weekly roll number of pupils is 5,232, of whom 2,409 are girls. No less than 51 of the purely native schools gained over 90 per cent in regularity of attendance. In the ordinary public school the Maori is at a disadvantage, and there is a consensus of opinion that in the higher classes—English and arithmetic in particular—he finds the subjects too difficult, while very few of the natives seek to obtain proficiency certificates at the end of the standard (grade) 6 course. Irregularity of attendance and want of proper care in the home are the contributing factors.

As regards secondary education, it appears that there were 6,905 pupils (4,021 boys, 2,884 girls) in public schools of this grade, and 992 pupils in the private secondary schools. Complaint is made of the failure of a large part of the pupils to complete an entire course of secondary instruction, and the legislature has been urged to devise means for preventing this wastage.

By recent legislation the status and emoluments of secondary school teachers have been appreciably improved. Men principals are now paid £586 per year and women principals £436; the salaries of assistants are, for men £236, for women £187. By comparison with the salaries prior to 1914 this shows increases as follows: £61 a year for men principals and £18 for assistants; £39 a year for women principals and £24 a year for assistants. It is noted further that in secondary departments salaries have been increased and made uniform.

The provision for elementary education at public expense is completed by the following special schools:

Pupils and expenditures of special schools.

Class of institution.	Pupils.	Expenditure.
Industrialschools or reformatories.....	3,166	£41,948
School for the deaf.....	99	3,740
School for the blind.....	34	1,940
School for feeble-minded.....	73	15,811

TECHNICAL SCHOOLS.

Says Mr. Cohen:

It was thought that war conditions would have a depressing effect on the attendance at technical schools, but the reverse has been the case, and a substantial increase of both classes and students has been recorded. The attend-

ances aggregated 20,202 pupils, of whom 6,983 children from the primary schools received free tuition. The capitation paid to the controlling authorities amounted to £48,475, being at the rate of £2.4 per pupil. There is a notable appreciation by local governing bodies of the work carried on in this department of the State's activities, no less than £5,000 having been contributed by the local authorities, industrial organizations, and others. This action entitles them to a share in the management of the schools, but they can not interfere in any way with the course of instruction. The contributors receive a Government grant of £1 for every £1 so subscribed.

The proportion of pupils in the different courses of study are as follows:

Courses of instruction :	Per cent of students.
Clerical	10
Professional	18
Domestic science	20
Agriculture	8
Trades and industries	25
Unclassified	19

More than half the pupils were above 17 years of age and about one-half were young women. The report of the minister notes that—

With a view of helping disabled soldiers who have returned from the theater of war to better equip themselves to earn a steady livelihood, the Government has thrown open to them, free of all charge, the full advantages of the technical colleges, and the privilege has been largely utilized.

In addition to the organized technical schools, the Government promotes the technical departments of high schools by capitation grants, amounting in 1915 to £20,000, which was at the rate of £10.7 for each pupil enrolled. These departments enrolled 2,000 pupils.

INCREASING EXPENDITURE.

In his comments upon the official report Dr. Cohen notes the ever-increasing cost of national education. This was urged upon the attention of Parliament by the minister of education, who, in his memorandum on the subject, says:

The cost of primary education rose from £1,184,000 in 1914-15 to £1,273,000 the past year, a result chiefly of the automatic operation of the new salary measure. Thus the cost per head of the Dominion's population increased from 20s. 9d. in 1914-15 to 21s. 11d. in 1915-16, while the cost of secondary instruction rose in the same period from £175,000 to £197,000, principally due to the increased cost of maintenance. It follows that the total cost for national education was raised in one year by £118,000, equal to 1s. 4d. per head of the population of New Zealand. For the purposes of comparison it is stated that the United States expenditure on education is approximately £1.12.1 per head of its population.

THE UNIVERSITY.

The New Zealand University is an examining body to which are affiliated four teaching colleges. The latter registered 2,039 students in 1915, and of these, 112 (79 men; 33 women) passed the examination for the bachelor's degree, and 42 (26 men; 16 women) the examination for the status of master of arts, laws, or science. In addition two students qualified for the degree of doctor of medicine and one for that of doctor of literature. The number of men qualifying for a degree was 116, as against 167 the previous year. The reduction was due to the number of students enlisted in the military service.

The total income of the university in 1915 was £46,584.

CHAPTER XXXVII.

STATISTICAL SUMMARIES OF EDUCATION IN FOREIGN COUNTRIES.¹

The present chapter comprises a statistical survey of education in all countries from which reports have recently been received at this office. The information is arranged in three sections, the first pertaining to elementary education, the second and third sections, respectively, to secondary and higher education.

Of the three divisions the first alone offers data which fall naturally under common categories. In all civilized countries some provision is made for giving the great body of the children the elements of knowledge in schools maintained at public expense and under government supervision. Experience has shown that only by this means can nations be saved from the evils of illiteracy on the part of the masses. This universal conviction is accompanied by a very general agreement in regard to the subjects of instruction for elementary schools. The chief difference in this respect pertains to the number of years in the elementary course and the length of a school year.

It should be added that the statistics and discussion comprised in this chapter relate almost exclusively to the three departments of education which form ascending stages in a complete system of general education. In many cases the entire educational provision of a country is covered by the presentation, but in the principal nations, provision is made for vocational and technical training by agencies not included in the general system of education and not comprised in the same class of official reports. A bulletin treating of the higher technical schools of the leading nations has been prepared by experts in the bureau and will soon be issued. The time is not opportune for collecting adequate information with regard to vocational schools of varied types, or even in regard to secondary technical schools, which are well organized in several countries.

ELEMENTARY EDUCATION.

Table 1 comprises statistics relating to elementary schools. The number of children under instruction (columns 5 to 7) is a matter

¹ Prepared by Anna Tolman Smith, specialist in foreign educational systems, assisted by W. S. Jesien, translator of Slavonic languages.

of such importance that in all countries periodic censuses are taken to determine this fact. These enumerations are made annually or biennially, as a rule, and serve in part as the basis for estimating the amount of appropriation to be made by the respective governments for elementary education. Other considerations also affect these estimates; for instance, the policy of extending special aid to poor districts, and the purpose of making liberal provision for medical inspection and other welfare services in connection with the schools.

The proportion of pupils in elementary schools to the entire population, as given in column 8, Table 1, has particular interest for students of sociology, since it affords a measure of the success of the effort to get all children under instruction. Naturally, this item must be interpreted with reference to the relation of the total child population to the adult population, which in a few countries, notably France, is below the normal. It may be assumed, however, that in countries having at least 13 per cent of the population enrolled in elementary schools the problem of school provision is solved. Those countries in which the proportion of the population enrolled is less than 13 per cent have still to complete the elementary school provision and to enact compulsory school-attendance laws with means for their enforcement.

Attention should be called to the fact that Table 1 includes, besides independent countries, several which do not possess responsible government. These are all dependencies of Great Britain, the chief in extent and population being British India. With respect to this imperial possession, the chief educational question is that of the progress which has been made in extending modern instruction among the natives. The usual terms of school classification can not well be applied here, since, as compared with European countries, nearly all the instruction given in the modern schools is elementary in character. At the same time the enrollment in elementary schools in India, as elsewhere, is a measure of the success of the effort to get all children into schools under public control. This is evident from the fact that the total enrollment in these schools is 73 per cent of the pupils enrolled in all classes of institutions as shown by a statistical summary for India given in chapter XXXV.

In the island dependencies of Great Britain included in the table the systems of education are comparable in their results with those of self-governing countries. They have been long maintained on the same basis, and progress steadily from year to year.

In the self-governing colonies that are comprised in the Union of South Africa the educational statistics pertain to the white population alone; although schools for the natives are maintained by the Government and by missionary agencies aided by the Government, their inclusion in this table would destroy the comparative value of

the statistics relating to the schools for the Europeans, without conveying any fair idea of the work carried on in the interests of the natives.

For the great majority of the countries the schools included in the table correspond to the graded city schools and the rural schools of the United States. Infant schools (kindergartens, asili, etc.) for children under 5 are not included, even when supported by public funds. In the Provinces of Canada, excepting Ontario, the pupils in public high schools are included, but, as will be seen by reference to the chapter on Canada (p. 514), they do not form a very large part of the total enrollment.

The item of expenditure, column 12, includes in every case the current cost of the schools and, as a rule, the cost of administration as well. The capital expenditure for permanent works, sites, buildings, etc., is not generally included; exceptions, when known, are indicated by footnotes. It will be observed, also, that in a few cases the expenditures are not given for the same year as the enrollment. This is due to the fact that the business and educational work of school systems are under different direction, and their reports are seldom synchronous. At the same time the school expenditure for a particular year differs little from that of the next year, except in cases where large outlays are made for sites and buildings.

Statistics of elementary education in foreign countries.

Countries.	Population.		Date of school statistics.	Enrollment in elementary schools.			Per cent of population enrolled.	Teachers.			Expenditure.			Chief officer of education.
	Number of inhabitants.	Date of census or estimate.		Boys.	Girls.	Total.		Men.	Women.	Total.	Per capita of—			
											Total.	Enrollment.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EUROPE.														
Austria-Hungary:														
Austria.....	28,995,844	1912	1911	.....	.....	4,533,734	15.63	.....	.....	110,607	.....	.....	.....	Minister of instruction.
Hungary (including Croatia and Slavonia).....	20,886,487	1910	1911-12	.....	.....	2,969,444	14.21	.....	.....	49,150	.....	.....	.....	Minister of education and public worship.
Belgium.....	7,571,387	1912	1912	446,098	469,279	935,377	12.4	9,830	11,752	22,324	\$9,290,793	\$9.93	\$1.22	Minister of science and arts.
Bulgaria.....	4,337,516	1910	1910	.....	.....	433,562	10.45	.....	.....	8,686	2,270,313	.....	.....	Minister of public instruction.
Denmark.....	2,775,076	1911	1913	.....	.....	385,387	13.88	.....	.....	.....	.....	.....	.....	Do.
France.....	39,601,503	1911	1912-13	2,741,542	2,766,992	5,508,534	13.90	.....	.....	156,180	243,517,087	7.90	1.09	Minister of public instruction, fine arts, and inventions pertaining to national defense.
German Empire.....	64,925,060	1910	1911	5,291,839	5,290,693	10,582,532	16.30	153,364	136,223	289,587	106,695,954	15.75	2.56	Minister of ecclesiastical and educational affairs.
Prussia (Kingdom).....	40,165,219	1910	1911	3,383,606	3,367,841	6,751,531	16.80	95,554	120,948	216,502	106,304,727	15.74	2.64	Minister of worship and instruction.
Bavaria (Kingdom).....	6,887,291	1910	1911	522,240	521,518	1,043,758	15.15	13,577	4,877	18,454	14,867,679	14.24	2.15	Minister of department of schools.
Saxony (Kingdom).....	4,806,661	1910	1911	396,350	410,407	806,757	16.07	13,385	710	14,095	14,262,589	17.67	2.06	Do.
Württemberg (Kingdom).....	2,437,574	1910	1911	172,246	189,747	361,993	14.85	5,480	893	6,373	5,613,352	15.23	2.26	Do.
Baden (Grand Duchy).....	2,142,833	1910	1911	170,159	174,030	344,189	16.06	4,823	1,050	5,873	5,143,974	14.94	2.40	Minister of worship and public instruction.
Hesse (Grand Duchy).....	1,282,051	1910	1911	105,093	105,613	210,706	16.43	3,348	581	3,929	2,985,633	14.16	2.32	President of department of schools.
Mecklenburg-Schwerin (Grand Duchy).....	639,958	1910	1911	48,438	44,990	93,428	14.59	1,995	1,113	3,138	1,261,058	13.49	1.97	Minister of justice.
Saxe-Weimar (Grand Duchy).....	417,166	1910	1911	32,522	33,124	65,646	15.74	1,105	76	1,181	1,011,922	15.55	2.42	Chief of department of worship and instruction.
Mecklenburg-Strelitz (Grand Duchy).....	106,347	1910	1911	7,807	7,890	15,697	14.76	360	28	388	197,242	12.56	1.85	Minister of justice, ecclesiastical affairs, and instruction.

Oldenburg (Grand Duchy).	483,042	1910	1911	42,533	41,590	84,123	17.41	1,256	263	1,519	1,266,875	15.05	2.62	Chief of department of justice, worship, and instruction.
Brunswick (Duchy).....	491,387	1910	1911	40,321	38,712	70,033	16.90	1,348	246	1,594	1,315,387	16.64	2.66	President of commission of instruction.
Saxe-Meiningen (Duchy).	278,702	1910	1911	24,360	24,554	48,923	17.52	785	118	903	765,106	15.63	2.74	Chief of department of justice, worship, and instruction.
Saxe-Allenberg (Duchy).	216,128	1910	1911	18,922	19,294	38,216	17.88	566	55	621	477,032	12.48	2.20	Director general of schools.
Saxe-Coburg-Gotha (Duchy).	257,177	1910	1911	21,908	21,918	43,526	16.92	721	146	867	687,924	15.80	2.67	President of department of worship and public instruction.
Anhalt (Duchy).....	331,128	1910	1911	26,003	26,576	53,179	16.60	932	407	1,339	929,213	17.47	2.80	President of department of instruction.
Schwarzburg-Sondershausen (Principality).	89,984	1910	1911	7,435	7,318	14,753	16.40	243	17	260	171,600	11.63	1.90	Chief of department of worship and instruction.
Schwarzburg-Rudolstadt (Principality).	100,702	1910	1911	9,155	8,813	17,968	17.84	300	7	307	220,177	12.25	2.18	President of consistory.
Waldeck (Principality).	61,607	1910	1911	5,301	5,277	10,581	17.14	165	22	187	122,687	11.59	1.90	Inspector general of schools.
Reuss, senior line (Principality).	72,616	1910	1911	6,210	6,562	12,802	17.63	103	17	210	170,300	14.00	2.46	President of department of worship and instruction.
Reuss, junior line (Principality).	152,752	1910	1911	12,586	12,829	25,415	16.63	417	26	443	322,930	12.70	2.11	President of consistory.
Schaumburg-Lippe (Principality).	46,652	1910	1911	3,965	3,809	7,864	16.35	103	4	107	88,103	11.20	1.58	Head of the consistory.
Lippe (Principality).....	150,937	1910	1911	12,015	12,278	24,893	16.49	320	27	356	271,130	10.08	1.70	Chairman senate committee on public instruction.
Lubeck (Free City).....	116,599	1910	1911	8,453	8,503	16,956	14.60	300	248	548	341,787	20.15	2.93	President of commission of worship and instruction.
Bremen (Free City).....	298,736	1910	1911	17,842	17,942	35,784	12.90	608	280	868	790,046	22.10	2.67	Do.
Hamburg (Free City)....	1,015,707	1910	1911	57,759	57,848	115,607	11.38	2,182	1,399	3,581	3,387,396	29.30	3.33	President of board of education.
Great Britain and Ireland:														
England and Wales:	36,960,684	1914	1915			6,108,648	16.52				124,208,750	20.20	3.36	Secretary of the committee of council on education.
Scotland.....	4,747,167	1914	1913-14			843,309	17.38	5,355	14,803	420,798	20,328,835	24.10	4.27	Commissioners of national education in Ireland.
Ireland.....	4,381,398	1914	1914			679,762	15.51			13,458				Minister of public instruction.
Greece.....	2,765,000	1914	1910-11	177,596	72,458	259,854	9.40			9,641	1,930,000			Do.
Italy.....	35,597,784	1914	1911			3,150,240	8.84			70,074				Director of public instruction.
Malta.....	228,534	1911	1914-15			25,503	11.16			135,837	5.32		.59	Minister of interior.
Netherlands.....	6,212,701	1913	1912-13			943,206	15.18			32,654				Minister of worship and instruction.
Norway.....	2,391,782	1916	1912			378,172	15.81	6,002	2,959	9,051	5,901,285	15.65	2.46	Minister of public instruction.
Romania.....	7,508,009	1912	1912-13			616,570	8.21			8,240				Do.
Russia.....	163,919,000	1911	1911			10,910,510	3.77			203,273				Director general of school system.
Finland.....	3,115,197	1916	1912			333,980	10.73			2,540				Minister of public instruction.
Serbia.....	2,911,701	1910	1916			145,570	5.00							Do.
Spain.....	19,995,446	1910	1913			2,052,158	10.26							Minister of public education and ecclesiastical affairs.
Sweden.....	5,670,607	1914	1913			808,112	14.23			23,206	12,655,109	15.66	2.23	(No federal officer.)
Switzerland.....	3,831,226	1912	1912			551,250	14.39			12,612	4,380,140	7.58	1.14	

^a Volkschulen and Mittelschulen.

^b Includes 550 teachers not classified by sex.

¹ Populations of later date than 1911 are reported estimates.

² State appropriations only.

Statistics of elementary education in foreign countries—Continued.

Countries.	Population.		Date of school statistics.	Enrollment in elementary schools.			Per cent of population enrolled.	Teachers.		Expenditure.			Chief officer of education.	
	Number of inhabitants.	Date of census or estimate.		Boys.	Girls.	Total.		Men.	Women.	Total.	Per capita of—	Enrollment.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ASIA.														
India:														
British Provinces.....	242,988,947	1911	1914-15	4,518,004	929,846	5,447,850	2.24				\$8,648,115	\$1.58	\$80.035	Secretary, department of education.
Mysore (Native State)....	5,806,193	1911	1913-14	93,972	14,171	108,143	1.86				132,050	1.22	.022	Inspector general of education.
Ceylon.....	4,262,097	1914	1914		381,334	381,334	8.94				394,593	1.03	.092	Director of public instruction.
Japan.....	53,696,868	1914	1912			7,021,661	13.07			157,536	127,966,902	3.98	.52	Minister of state for education.
AFRICA.														
Cape of Good Hope.....	2,583,177	1911	1915			210,588	17.41				4,020,285	45.48	7.92	Superintendent general of education.
Natal.....	299,000	1915	1915			21,023	21.23				407,520	19.38	4.11	Superintendent of education.
Orange Free State.....	2,175,180	1911	1915			29,500	16.83							Director of education.
Transvaal.....	2,420,831	1911	1915			270,617	16.78	1,359	1,335	2,694				Do.
Mauritius.....	379,853	1914	1913			20,958	5.51			636				Director of public instruction.
NORTH AMERICA.														
Canada:														
Alberta.....	539,000	1915	1914			89,910	16.08			3,978	2,066,351	51.90	8.05	Minister of education.
British Columbia.....	502,000	1913	1914-15			64,204	12.80			1,947	3,917,446	60.95	7.83	Chief superintendent of education.
Manitoba.....	499,014	1913	1914-15			100,963	22.23			2,976	4,326,600	42.85	8.68	Minister of education.
New Brunswick.....	351,889	1911	1914-15			72,013	20.46			2,106	1,131,835	15.71	3.21	Chief superintendent of education.
Nova Scotia.....	492,338	1911	1915			107,768	21.88	256	2,689	2,945	1,593,026	14.77	3.23	Superintendent of education.
Ontario.....	2,523,274	1911	1914	252,202	241,036	493,238	19.57	1,628	9,918	11,546	14,850,968	30.07	5.88	Superintendent of education.
Prince Edward Island.....	83,728	1911	1915	9,744	8,688	18,402	19.60	152	434	586	259,670	14.11	2.77	Chief superintendent of education.

Quebec.....	2,003,232	1911	1913-14	210,937	224,958	643,589	21.75	2,052	12,267	14,319	7,892,140	18.15	3.93	Superintendent of public instruction.
Saskatchewan.....	492,432	1911	1914	58,036	53,023	110,059	22.35	1,552	2,919	4,501	74,691,825	42.02	9.52	Minister of education.
Mexico.....	15,501,684	1912	1912	.....	.....	120,295	.76	.....	.....	.....	.....	.....	.....	Secretary of public instruction and fine arts.
WEST INDIES.														
Barbados.....	173,359	1913	1912	13,591	12,685	26,276	15.41	.....	.....	247	71,636	2.60	.41	Secretary of public instruction.
Cuba.....	2,469,125	1914	1914	.....	.....	277,013	11.21	.....	.....	4,333	326,758	3.44	.39	Director of education.
Jamaica.....	831,353	1911	1914-15	.....	.....	94,953	11.42	.....	.....	1,328	297,320	5.77	.84	Inspector of schools.
Trinidad.....	332,145	1914	1913	.....	.....	51,497	14.62	.....	.....	.....	.....	.....	.....	.....
CENTRAL AMERICA.														
Costa Rica.....	410,981	1913	1913	.....	.....	33,084	8.05	.....	.....	1,306	.....	.....	.....	Secretary of public instruction.
Guatemala.....	2,119,165	1913	1913	.....	.....	61,136	2.90	.....	.....	.....	.....	.....	.....	Do.
Honduras (British).....	40,458	1911	1912	.....	.....	5,405	13.35	.....	.....	103	18,365	3.40	.45	Inspector of schools.
Honduras (Uepublic).....	553,416	1910	1913	.....	.....	40,565	7.33	.....	.....	1,138	.....	.....	.....	Minister of foreign affairs and public instruction.
Nicaragua.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Director of public instruction.
Salvador.....	1,225,835	1914	1914	.....	.....	54,514	4.44	.....	.....	.....	.....	.....	.....	Do.
Panama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SOUTH AMERICA.														
Argentina.....	7,467,878	1912	1914	.....	.....	890,000	11.91	.....	.....	26,000	23,786,700	26.72	3.18	Minister of public instruction.
Bolivia.....	2,526,540	1914	1913	.....	.....	48,865	2.33	.....	.....	3,900	.....	.....	.....	Minister of justice and public instruction.
Brazil.....	24,308,219	1913	1910	.....	.....	634,539	2.61	.....	.....	.....	.....	.....	.....	Minister of justice and of the interior.
Chile.....	3,551,703	1913	1914	.....	.....	381,883	10.75	.....	.....	.....	.....	.....	.....	Minister of justice and public instruction.
Colombia.....	5,100,000	1913	1914	.....	.....	280,000	5.50	.....	.....	.....	.....	.....	.....	Minister of public instruction.
Ecuador.....	1,590,000	1910	1913	.....	.....	55,531	4.36	.....	.....	.....	.....	.....	.....	Do.
Paraguay.....	850,000	1912	1914	.....	.....	71,324	8.40	.....	.....	1,377	.....	.....	.....	Minister of justice, worship, and public instruction.
Peru.....	4,500,000	1908	1913	.....	.....	146,272	3.25	.....	.....	3,063	1,196,234	8.17	.26	Minister of justice and public instruction.
Uruguay.....	1,279,395	1913	1913	.....	.....	91,746	7.17	.....	.....	.....	1,990,137	21.79	1.56	Minister of public instruction.
Venezuela.....	2,755,685	1913	1912	.....	.....	47,334	1.72	.....	.....	1,602	.....	.....	.....	Do.

¹ Direct expenditure only.² White only.³ Not including \$3,108,522 paid on debentures, notes, etc.⁴ Includes \$1,558,533 for buildings and sites; in addition, \$2,790,291 was paid on bonds, notes, etc.⁵ Not including high schools with 36,466 pupils.⁶ Including model schools and academies having 191,288 pupils, of whom 15,660 were in secondary studies.⁷ Includes \$2,013,316 paid on notes, debentures, etc.

Statistics of elementary education in foreign countries—Continued.

Countries.	Population.		Date of school statistics.	Enrollment in elementary schools.			Per cent of population enrolled.	Teachers.		Expenditure.			Chief officer of education.	
	Number of inhabitants.	Date of census or estimate.		Boys.	Girls.	Total.		Men.	Women.	Total.	Per capita of—			
											Enrollment.	Population.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AUSTRALASIA.														
Australia:														
New South Wales.....	1,855,561	1914	1914	144,670	132,722	277,392	14.94	3,497	3,384	6,881	8,259,672	26.77	4.45	Minister of public instruction.
Queensland.....	678,864	1914	1914	.....	.....	108,245	15.94	1,526	1,946	3,472	2,350,509	21.71	3.46	Secretary for public instruction.
South Australia.....	438,173	1914	1914	.....	.....	58,124	13.26	504	1,263	1,767	1,173,329	20.18	2.67	Minister controlling education.
Victoria.....	1,421,985	1914	1915	.....	.....	218,300	15.35	2,184	3,901	6,085	3,810,954	17.45	2.67	Minister of public instruction.
Western Australia.....	324,740	(1914)	1915	.....	.....	46,396	14.07	508	1,086	1,594	1,157,871	24.95	3.56	Minister of education.
Tasmania.....	196,753	1914	1915	.....	.....	32,194	16.36	.....	.....	968	639,673	19.86	3.25	Do.
New Zealand.....	1,084,662	1913	1914	93,085	85,424	178,509	16.45	1,767	3,290	5,057	4,498,576	25.30	4.14	Do.

SECONDARY EDUCATION.

The classification of schools in different countries presents so many standards that the term "secondary" in application to a collective table, such as is here attempted, has only a relative significance. The differences referred to are due in part to the differences in the scope of elementary education, which often covers only the rudiments of instruction, while the secondary school overlaps a considerable portion of the proper primary field. In other cases the period between elementary and secondary education is provided for by special schools preparatory to the latter.

To the province of secondary education belong also schools serving various special purposes and having no definite relation to either primary or higher education. In this class are vocational, continuation, trade, and other schools. They are, however, not included in the present consideration.

The principle that secondary schools lead to university education can not be accepted as an exact basis of classification, since in many countries short preparatory courses serve as a link between the two.

Notwithstanding this diversity of secondary systems, uniformity obtains among certain groups of countries, which therefore lend themselves easily to collective presentation. It is noticeable, also, that, irrespective of the schemes of classification, the courses of study for secondary instruction are essentially the same in all countries. They are comprised in four divisions: Classical, semi-classical, "real," and technical.

In the countries of Continental Europe the gymnasium (*lycée* in France) is the prevailing type of secondary school. The course covers eight or nine years, or classes, often preceded by a preparatory class, and leading directly to university studies. This type of secondary school does not stand in direct connection with the primary school, but partly invades its province, the lower classes of the gymnasia being usually equivalent to the corresponding higher classes of primary schools.

This type of secondary education in Europe is illustrated by the following conspectus of courses of study, representing, respectively, the German gymnasium and the classical division of the French *lycée*. The German "real" schools differ from the gymnasia by the absence of Latin and Greek, which are replaced by modern languages and science. The same divisions, but often under different names, prevail throughout the Continent of Europe. France has a system of elective courses arranged in cycles and completed by one year of philosophical or mathematical specialization.

Course of study of the French lycée (classical section).

Subjects.	Preparatory.		First cycle.			Second cycle.		
	First year.	Second year.	VI and V.	IV.	III.	II.	I.	Class of philosophy.
Moral and civic instruction.....	(¹)	(¹)						
French and historic narrations.....	10	8						
Literary subjects (French, Latin, Greek).....			10	13	14	13	14	2 4
Modern languages.....		2	5	3	3	2	2	2 2
History and geography.....	1½	1½	3	3	3	4½	5	3
Arithmetic and mathematics.....	3	3	2	2	3	2	2	2
Natural sciences.....			1	1				2
Physics and chemistry.....								3
Object lessons.....	1	1						
Writing.....	2½	2½						
Drawing.....	1	1	2	1	1	2		2
Singing.....	1	1						
Philosophy.....								8
Total.....	20	20	23	23	24	23½	23	20

¹ Combined with French history and geography.² Optional.*Course of study of the German gymnasium.*

Subjects.	VI.	V.	IV.	III.	II.	I.	LI.	UI.	Total.
Religion.....	3	2	2	2	2	2	2	2	19
German and historical tales.....	4	3	3	2	3	3	3	3	26
Latin.....	8	8	8	8	7	17	17	17	68
Greek.....				6	6	6	6	6	36
French.....			4	2	3	3	3	3	20
History.....		2	2	2	2	1 3	1 3	1 3	17
Geography.....	2	2	2	1	1	1			9
Arithmetic and mathematics.....	4	4	4	3	3	1 4	1 4	1 4	34
Natural science.....	2	2	2	2	2	2	2	2	18
Writing.....	2	2							4
Drawing.....		2	2	2	2				8
Total.....	25	25	29	30	30	30	30	30	259

¹ The figures in italic indicate the privilege of a temporary shifting of the number of hours within the several groups of subjects is allowed.

TABLE 2.—*Statistics of secondary schools.*

Countries.	Year of report.	Types of secondary schools.	Schools.	Teachers.	Students
Austria-Hungary:					
Austria.....	1910-11	{ Gymnasias and real gymnasias.....	292	6, 704	95, 933
		{ Realschools.....	146	3, 480	47, 562
		{ Gymnasias for girls.....	24	244	3, 254
		Total.....	462	10, 428	146, 749
Hungary.....	1911-12	{ Gymnasias.....	192	3, 971	66, 863
		{ Realschools.....	43	1, 044	14, 938
		Total.....	235	5, 015	81, 801
Belgium.....	1912	{ Royal atheneums and colleges.....	35		8, 323
		{ Middle-class schools:			
		Male.....	90		19, 765
		Female.....	44		10, 104
		Middle-class normal schools.....	4		209
		Total.....	173		38, 401
Bulgaria.....	1911-12	{ Gymnasias.....	47	867	16, 487
		{ Lower middle schools.....	316	2, 111	55, 512
		{ Special technical and other schools.....	155		9, 493
		Total.....	518		81, 492

TABLE 2.—*Statistics of secondary schools—Continued.*

Countries.	Year of report.	Types of secondary schools.	Schools.	Teachers.	Students.
Denmark.....	1910-11	State schools.....	12	196	2,878
		Private:			
		Latin schools.....	39	903	9,860
		Realskole.....	126	1,174	17,815
		Total.....	177	2,273	30,553
France.....	1913	Lycées for boys.....	112		62,879
		Communal colleges.....	231		37,324
		Secondary schools for girls.....	193		38,358
		Total.....	536		138,561
Germany.....	1911	Gymnasia.....	524	9,769	160,237
		Realgymnasia.....	223	3,708	70,357
		Oberrealschulen.....	167	3,473	75,832
		Girls' gymnasia.....	39	1,039	22,137
		Total.....	953	17,989	328,563
Greece.....	1910-11	All secondary schools.....	338	1,318	31,399
Italy.....	1912-13	Ginnasi (gymnasia).....	553		49,784
		Licei (lyceums).....	239		15,136
		Total.....	792		64,920
Netherlands.....	1913-14	Gymnasia.....	33	499	2,817
		Middle-class schools.....	105	1,713	15,807
		Total.....	138	2,212	18,624
Norway.....	1911-12	All secondary schools.....	89		19,716
Portugal.....	1913	do.....	31		10,401
Rumania.....	1906-7	Lyceums, gymnasia, and seminaries for boys.....	47	873	14,016
		High schools for girls.....	10	161	1,615
		Total.....	57	1,034	15,631
Russia.....	1912	Gymnasia.....	393	10,500	137,594
		Real schools.....	276	6,260	76,971
		Gymnasia for girls.....	779	24,022	292,353
		Total.....	1,448	40,782	506,918
Finland.....	1908-9	Lyceums.....	66	1,022	14,371
Serbia.....	1910	Secondary schools for boys.....	20	354	8,858
		Secondary schools for girls.....	3	70	1,291
		Total.....	23	424	10,149
Spain.....	1915	"Institutions".....	59		33,071
Sweden.....	1914	Public high schools.....	77		21,364
Switzerland.....	1912	Schools leading to higher institutions..	84	1,068	17,266
Japan.....	1913-14	Middle schools.....	316	6,230	131,242
		High schools for girls.....	328	4,074	82,474
		Total.....	644	10,304	213,716

SECONDARY EDUCATION IN GREAT BRITAIN AND IRELAND.

Secondary education in England up to a recent date was in a chaotic state, but as a result of persistent efforts on the part of the universities, educational associations, and the Government, the agencies of secondary education have been largely systematized without the loss of their independent authority and individuality.

On the basis of management the following types of secondary schools are recognized: Endowed, proprietary (maintained by stock

companies), and private (under individual ownership and direction), and public secondary schools established and maintained by municipalities and counties.

As a consequence of measures brought about by the reorganization of the English system under the education act of 1902, a large proportion of the secondary schools of England and Wales have come into relations with the Government and are now borne on what is called the grant list. In addition to the schools receiving appropriations, there are other secondary schools which do not desire to follow a prescribed program, but at the same time seek recognition from the Government in accordance with conditions which the Government lays down as guaranties of their efficiency. The Government regulations offer a definition which has assisted materially in determining a standard for secondary education in the class of schools which are not intended chiefly to prepare for university matriculation. In order to be recognized as a secondary school within the meaning of these regulations, a school must offer to each of its pupils a progressive course of general education with the requisite organization, curriculum, teaching staff, and equipment of a kind and amount suitable for pupils of an age range at least as wide as from 12 to 17. A school will not be recognized as a secondary school unless (1) an adequate proportion of the pupils remain at least four years in the school, and (2) an adequate proportion of the pupils remain in the school up to and beyond the age of 16.

The required curriculum must include the following subjects:

English language and literature, at least one language other than English, geography, history, mathematics, science, and drawing. A curriculum including two languages other than English, but making no provision for instruction in Latin, will only be approved where the board are satisfied that the omission of Latin is for the educational advantage of the school. The instruction in science must include practical work by the pupils.

The curriculum must also make such provision as the board, having regard to the circumstances of the school, can accept as adequate for organized games, physical exercises, manual instruction, and singing.

In schools for girls the curriculum must include provision for practical instruction in domestic subjects, such as needlework, cookery, laundry work, house-keeping, and household hygiene; and an approved course in a combination of these subjects may for girls over 15 years of age be substituted partially or wholly for science and for mathematics other than arithmetic.

In regard to internal organization, every secondary school of England has its own scheme of articulation. As a rule, however, in the higher secondary schools, that is, schools retaining their pupils up to 18 years of age and preparing them for university matriculation, distinct provision is made for a classical course and a modern course. The subjects of instruction in schools of this class are determined largely by the requirements of the universities in regard to

compulsory classical languages. A typical program comprises the following subjects:

Classical side: (1) Religion (or Divinity, as it is sometimes called), (2) English, (3) Latin, (4) Greek, (5) French, (6) history, (7) geography, (8) arithmetic, (9) mathematics, (10) natural sciences (viz, physics, chemistry, etc.), (11) drawing, (12) singing, and such other subjects as (13) German, etc., (14) instruction in instrumental music, etc. The two last subjects, viz, German and instrumental music, and also similar subjects, are usually optional, and extra fees are required for them.

Modern side: (1) Mathematics, (2) English, (3) Latin, (4) French, (5) German, (6) history and geography, (7) natural science (viz, chemistry and physics), (8) drawing, and (9) singing.

The secondary schools of Scotland, which have also been brought into close relations with the Government, are much more nearly uniform in character than those of England.

Secondary education in Ireland has been largely systematized by the agency of the Intermediate Education Board, an examining body which tests the qualifications of all candidates who present themselves. The examination scheme comprises the recognized subjects of secondary education, hence the pupils who present themselves are properly regarded as of secondary grade.

The different divisions of the British Empire have maintained the same spirit of independence and individuality in their secondary schools. The status of these schools in Canada and Australia is considered in the chapters dealing respectively with those two divisions of the Empire.

It would be misleading to comprise schools so varied in character as those of Great Britain and Ireland in a table with the schools of continental countries organized under government supervision or control and following official programs which are uniform for all schools of the same class. The following statements comprise all the statistics at present attainable for the secondary schools of the United Kingdom.

United Kingdom.

Secondary schools on the Government list, 1913-14.	Schools.	Students.		
		Boys.	Girls.	Total.
England.....	1,176	119,234	103,041	222,275
Scotland.....	195			47,742
Ireland—Secondary pupils examined.....		6,346	3,830	10,176

As regards England it should be added that the numbers given above do not include secondary schools provided by local authorities, which in 1909 numbered 258, with nearly 48,000 pupils. There are also, on a rough estimate, from 450 to 500 private secondary schools, which in 1910 were educating between 60,000 and 70,000 pupils.

STATISTICS OF UNIVERSITIES IN FOREIGN COUNTRIES.

The statistics comprised in this section relate, it will be seen, to the period immediately preceding the war. For the leading countries of Europe detailed tables are presented, showing the distribution of students by universities. Exception is made in the case of Russia, which is the subject of a special chapter in this report; for the purpose of making that presentation complete, the table of detailed university statistics was there included.

These detailed tables comprise the institutions that are recognized as universities in their respective countries, and therefore the term "university" is used in somewhat different significations. On the whole, however, admission requirements based on well-defined and equivalent programs of secondary education, afford a standard for the classification of higher institutions. Another important standard is the authority to confer degrees.

The detailed statistics preceding the general table are arranged after a plan of presentation uniform so far as is practicable in view of the diversity of reports on which they are based.

GREAT BRITAIN AND IRELAND.

The universities of Great Britain represent three distinct eras in the history of higher education in the Kingdom. Oxford and Cambridge and the universities of Scotland are separated in their origin by many centuries from the later universities, and in their organization and scholastic standards preserve signs of the varied conditions under which they have developed. They have borne an important part in modern progress, and have in turn been modified and invigorated by modern influences. The later universities belong to two periods. Durham University, founded in 1832, was the pioneer in the movement for providing the north of England with university facilities. Although it followed closely the curricula of the older universities, the claims of the technical professions were recognized by temporary provision as early as 1837; and by the incorporation of the medical college at New Castle in 1852, and the North of England Institute of Mining and Mechanical Engineering in 1874, this institution was brought into the sweep of the modern movement.

The University of London was created as an examining body in 1837 as a protest against the religious restriction which prevailed at Oxford and Cambridge until 1854. The new university stood, therefore, from the first for the modern conception of higher education, which was fully embodied in the University of London Acts, 1898, by which it was transformed into a teaching university.

The remaining universities in Great Britain and the University Colleges of Wales arose in response to the popular demands for

education which marked the latter part of the nineteenth century in England. These institutions have one common characteristic: While preserving a fair proportion of classical studies, the curriculum is mainly devoted to modern languages and sciences and to the various branches of engineering, technology, and agriculture in order to supply capable experts for the great modern industries.

The varieties in type preclude the presentation of the British universities in one general table. The complex organization of Oxford and Cambridge is indicated by the number of their constituent colleges. The colleges all have a high degree of autonomy, but are under university statutes. These statutes determine the requirements for degrees which the university alone has authority to confer.

The colleges are richly endowed, the gross annual incomes ranging, for the Oxford colleges, from £7,179, reported for Hertford, to £79,561, reported for Magdalen. Incomes exceeding £20,000 a year are reported by 11 of the 22 colleges. The annual incomes of the Cambridge colleges range from £6,144, reported for St. Catharine's, to £84,993, reported for Trinity. Annual incomes exceeding £20,000 are reported by 4 of the 17 colleges. Each of the colleges, both at Oxford and Cambridge, contributes to university purposes an annual amount proportioned to its income. The universities also have independent sources of income.

In the acts of 1898, conferring teaching functions upon the University of London, certain schools and colleges were named as constituent bodies, and discretion was given to the senate to add any public educational institutions conforming to prescribed conditions. As will be seen by reference to the detailed table, this university now comprises 24 colleges or schools, giving instruction in 8 faculties.

The development of the modern universities has been stimulated by a parliamentary grant which has been appropriated annually since 1889, to be shared by the institutions on the condition that they submit annual reports to the education department. The grant, which began at £15,000, was raised to £25,000 in 1897. Upon similar terms the three university colleges of Wales each receive annually £4,000 from the treasury. These institutions, it will be noticed, are classed together in the second and third divisions of the detailed table.

Cambridge University has come into relation with the central board of education through the school of medicine, which received a grant from the public treasury for the first time in the financial year commencing April 1, 1915. The engineering department of Oxford University, which was founded by a statute of November 19, 1907, also participates in the grant administered by the board of education.

TABLE 3.—*Statistics of universities of England and Wales for 1913-14.*

Universities.	Teaching staff.	Students.	Expenditure.
INSTITUTIONS NOT IN RECEIPT OF THE EXCHEQUER GRANT.			
Cambridge.....	118	3,748	£93,028
Oxford.....	130	3,951	412,988
INSTITUTIONS IN RECEIPT OF THE EXCHEQUER GRANT.			
Birmingham.....	185	1,032	73,903
Bristol.....	150	898	138,317
Durham.....	128	² 1,950	³ 42,752
Leeds.....	162	1,214	67,154
Liverpool.....	214	1,365	79,912
Manchester.....	271	1,665	⁴ 84,166
Sheffield.....	168	2,350	50,205
London.....	1,078	⁵ 4,740 ⁶ 1,100	⁷ 184,863
Nottingham ⁸	95	² 1,919	23,502
Reading ⁸	102	² 1,096	29,027
Southampton ⁸	61	² 935	12,481
Wales.....	190	1,463	70,184

¹ Exclusive of Merchant Venturers' Technical College.

² Includes evening students.

³ For Armstrong College only.

⁴ Exclusive of Manchester Municipal School of Technology.

⁵ Internal students, those matriculated at the university and pursuing a course of study approved by it.

⁶ External students, all other matriculated students.

⁷ Exclusive of medical schools.

⁸ University Colleges.

In addition to the exchequer grant, several universities are recipients of parliamentary grants provided under other acts. These include grants disbursed by the board of education for technological work, for training of teachers, etc., as well as grants allowed by other Government departments.

The following table shows the percentages of (a) all parliamentary grants of which the several universities are in receipt, and (b) all grants from local authorities, in relation to the total incomes of the respective institutions. The remainder of the income is made up of the fees paid by the students, endowments, donations, and subscriptions, contributions from hospitals, and other institutions for services rendered, examination fees, etc.

TABLE 4.—*Universities in receipt of the exchequer grant.*

Universities.	Parliamentary grants.	Grants from local authorities.	Total annual income.
	<i>Per cent.</i>	<i>Per cent.</i>	
Birmingham.....	31.7	19.4	£75,495
Bristol.....	45.8	11.3	36,267
Durham University, Armstrong College.....	43.4	11.0	43,364
Leeds.....	38.6	21.5	67,242
Liverpool.....	30.1	15.0	79,329
Manchester.....	30.6	7.1	84,647
Sheffield.....	31.9	31.7	48,908
London.....	32.1	10.4	176,720
Nottingham.....	39.8	38.5	23,717
Reading.....	31.6	8.1	29,439
Southampton.....	32.4	48.3	12,486
Wales.....	55.3	5.9	64,632

TABLE 5.—*Statistics of universities of Scotland for 1913-14.*

Universities.	Date of establishment.	Professors.	Students.	Expenditure.
St. Andrews.....	1411	49	517	£40,764
Glasgow.....	1451	166	2,770	195,275
Aberdeen.....	1494	133	1,024	34,121
Edinburgh.....	1583	130	3,204	129,243

¹ In 1912.TABLE 6.—*Statistics of universities of Ireland for 1915-16.*

Universities.	Professors.	Students.
Dublin:		
Trinity.....	89	1,797
National.....	190	1,270
Belfast.....	68	550

¹ Incomplete.

FRANCE.

Higher education in France is the province of State universities and the special schools of university rank which are under the minister of public instruction. Each of the 15 State universities is an incorporated body, having its own budget and exercising self-government under the general supervision of the minister of public instruction and the higher council of education. The universities are organized in specialized faculties, preparing students for professional or official careers. The professors are appointed by the President of the Republic, from a list of candidates prepared by the university council. Each faculty has independent control of its separate affairs, elects its own dean and the members of the faculty council, and manages the budget assigned to it. The general council of the university, which is intrusted with all matters of interest to the entire body, is composed of the deans of the several faculties of the university and two other delegates from each and is presided over by the academic rector, who is the virtual chief (president of the university).

The income of each university is divided into the ordinary income and the extraordinary income. The former comprises the revenues from property and the interest on invested funds, the fees for matriculation, lecture fees, library and laboratory fees, the receipts from university publications, the State appropriations for current expenditures, appropriations by the departments and cities, and all other income of a permanent character. The extraordinary income includes gifts and legacies, loans, appropriations for building or other special purposes, and funds intended to meet temporary de-

mands. Each faculty comprised within a university has its own special budget. The salaries of all professors are paid from the State appropriation, according to a fixed schedule. A university may, however, make arrangements for additional service, to be paid for out of its own resources. In giving up to the universities the receipts from fees, which were formerly turned over to the State treasury, the legislature decided that they must be applied wholly to objects of immediate advantage to the students, such as the equipment of laboratories, libraries, new buildings, etc. Apart from these specific limitations, the universities have free disposal of their resources.

TABLE 7.—Universities of France, 1914.

Universities.	Professors and instructors.	Number of students.	Amount of State subvention.
			<i>Francs.</i>
Paris.....	606	17,308	732,382
Aix-Marseille.....	112	1,136	58,049
Besançon.....	33	257	50,934
Bordeaux.....	121	2,653	161,622
Caen.....	43	615	56,541
Clermont-Ferrand.....	43	244	65,727
Dijon.....	72	995	56,817
Grenoble.....	68	1,581	71,124
Lille.....	110	1,823	145,499
Lyon.....	159	3,183	189,737
Montpellier.....	123	2,120	151,910
Nancy.....	114	2,140	167,434
Poitiers.....	67	1,245	48,630
Rennes.....	77	1,563	70,121
Toulouse.....	114	2,986	170,428
Alger.....	66	1,358	.....

Distribution of students by faculties, 1914.

Law.....	16,465
Medicine.....	8,533
Sciences.....	7,330
Letters.....	6,586
Pharmacy.....	1,337
Total.....	40,251
Schools of medicine:	
Medicine.....	1,512
Pharmacy.....	274
Grand total.....	42,037

GERMANY.

The German universities are controlled by the State, but enjoy in their internal administration certain rights defined by statutes, often of ancient origin. Their maintenance is derived chiefly from State grants, the remainder being met from public funds, endowments, fees, etc. All the universities possess considerable properties in the form of grounds, buildings, collections, etc. which, in

several cases, notably that of the University of Greifswald, yield large revenues.

It will be observed that, outside of the faculties of theology, law, and medicine, the majority of the students are included in the faculty of philosophy, which, in Germany and several other countries, combines an extensive variety of subjects, such as natural science, mathematics, philology, literature, sociology, etc. Nearly one-half of the total number of students are registered in this faculty.

Teaching staffs, as represented in the tables, are composed of ordinary, honorary, and extraordinary professors, "privat-docents," and lecturers (lectors). The ordinary professors are appointed by the Emperor and have the status of Government officials. They form the real permanent teaching staff of the university, and, as a rule, they alone have the right of vote in matters pertaining to university self-government. The extraordinary professors are salaried or unsalaried. The position of the former is essentially the same as of ordinary professors. They are appointed permanently at a fixed salary, and are employed partly to complete the instruction in the chief branches of study, partly to represent those subjects for which as yet no ordinary professorship exists in the respective universities or elsewhere.

The unsalaried extraordinary professors draw no stipend, but some have a teaching commission and receive in that case remuneration.

The "privat-docents" are teachers recognized as qualified to lecture in the universities on subjects usually not essential to the particular branch, but of value as supplementary instruction. Privat-docentship is the initial stage of professorship, and successful privat-docents are in due time appointed professors. They draw college fees in the same way as professors, and their lectures are counted in the ordinary way for students who attend them.

Lectors were originally teachers of modern languages, but in more recent times their functions have frequently assumed a more scientific form, so that they are employed to complete the instruction of the respective ordinary professors. They are appointed temporarily and receive remuneration in proportion to work done.

In addition to the foregoing classes there are assistants, teachers of physical culture, etc.

The new University of Frankfort on the Main, opened October 18, 1914, and therefore not included in the general table, in the summer semester of 1915 had 854 students on the rolls, but of this number 139 were in active military service. The number of professors and instructors was 134.

The students were distributed by faculties as follows: Law, 119; medicine, 213; and philosophy, 522.

TABLE 8.—Universities of Germany, 1913-14.

Universities.	Date of foundation.	Professors and instructors.	Number of students.	Annual expenditure.
				Marks.
Berlin.....	1809	504	9,593	4,926,837
Bonn.....	1818	207	4,270	1,991,232
Breslau.....	1702	205	2,791	2,248,030
Erlangen.....	1743	90	1,341	1,283,000
Freiburg.....	1457	171	2,572	1,217,000
Giessen.....	1607	104	1,340	1,653,371
Göttingen.....	1737	175	2,815	1,882,647
Greifswald.....	1456	102	1,250	1,509,966
Halle.....	1502	185	2,910	2,218,524
Heidelberg.....	1386	198	2,409	1,409,000
Jena.....	1558	136	1,862	752,700
Kiel.....	1665	139	1,847	1,978,294
Königsberg.....	1544	172	1,568	1,847,729
Leipzig.....	1409	259	5,532	4,615,405
Marburg.....	1527	135	2,168	1,485,071
Munich.....	1472	290	6,802	(?)
Münster.....	1771	100	2,123	695,517
Rostock.....	1419	84	914	1,257,630
Strassburg.....	1567	187	2,092	1,633,085
Tübingen.....	1477	131	1,887	1,530,720
Würzburg.....	1402	107	1,515	1,115,000

Distribution of students by faculties, winter semester, 1913-14.

Theology:	
Evangelical.....	3,903
Catholic.....	1,939
	5,842
Law.....	10,987
Medicine, pharmacy, and dentistry.....	16,642
Philosophy, philology, mathematics, etc.....	26,130
Total.....	59,601

AUSTRIA-HUNGARY.

The organization of Austrian universities is similar to that of German universities in all essential features. One peculiarity of the Austrian institutions is their division into national groups. There are five German universities, two Polish, and one Bohemian, with instruction in the three respective languages, and with nationalistic spirit pervading deeply the whole university life.

The expenditure of the universities is met chiefly by State subsidies, income from fees, etc. Although they are under the direct control of the ministry of worship and public instruction, they enjoy an ample measure of autonomy.

Two new universities were founded in Hungary after the outbreak of the war. They are located respectively at Debreczin and Pressburg. The University of Debreczin has provision for five faculties, viz, theology, philosophy-history-philology, law-statesmanship, medicine, and mathematics-science. The University of Pressburg has no theological faculty and has an agricultural department in place of the faculty of mathematics and science, the remaining faculties being the same in both institutions.

The University of Debreczin was developed from a high school existing in that city for 320 years. The three departments of the school were transformed into university faculties. The University of Pressburg was founded likewise on an old institution—the Catholic faculty of law—which was incorporated into the new university. The faculties of medicine and mathematics-science at Debreczin are still in preparation, and will be opened in 1916–17. At the Pressburg institution the faculties of law and philosophy are still wanting.

TABLE 9.—*Statistics of universities in Austria and Hungary.*

AUSTRIA, IN 1913-14.

Universities.	Date of foundation.	Professors and instructors.	Number of students.	Annual income or expenditure.
				<i>Crowns.</i>
University of Cracow (Polish).....	1364	195	3,344	1,100,000
University of Czernowitz.....	1875	61	1,194	.....
University of Graz.....	1586	199	2,203	1,742,053
University of Innsbruck.....	1677	139	1,490	1,940,080
University of Lemberg (Polish).....	1661	186	5,871	1,248,000
University of Prague (Bohemian).....	1348	249	4,713	2,233,764
University of Prague (German).....	1348	225	2,282	1,883,438
University of Vienna.....	1365	666	10,310	.....

HUNGARY, IN 1912-13.

University of Agram.....	1776	82	915	873,094
University of Budapest.....	1769	270	7,814	3,740,364
University of Debreczen.....	1912	29	284	.....
University of Klausenburg.....	1872	110	2,124	2,228,769
University of Pozsony.....	1912	13	220	.....

Distribution of students by faculties.

Faculties.	Austria.	Hungary.
Theology.....	1,504	320
Law.....	11,788	8,019
Philosophy.....	8,988	
Medicine.....	5,008	2,534
Physico-mathematics.....	.....	96

SWITZERLAND.

TABLE 10.—*Statistics of universities in 1913-14.*

Universities.	Date of foundation.	Professors and instructors.	Number of students.	Annual expenditure.
				<i>Francs.</i>
Basel.....	1460	124	1,156	640,175
Bern.....	1834	165	2,302	1,110,118
Fribourg.....	1889	81	655	382,190
Geneva.....	1559	162	2,264	829,768
Lausanne.....	1537	124	1,482	773,310
Neuchâtel.....	1866	59	421	209,659
Zurich.....	1832	172	2,316	1,027,214

Distribution of students by faculties.

Theology :		
Evangelical.....	195	
Catholic.....	278	
		473
Law		1, 534
Medicine and dentistry :		
Medicine.....	2, 658	
Dentistry.....	59	
		2, 717
Veterinary medicine		137
Philosophy		3, 249
"Hearers" in all departments.....		2, 486
Total.....		10, 596

THE SCANDINAVIAN COUNTRIES.

Denmark.—The University of Copenhagen has been the seat of higher learning in Denmark for 438 years. It derives its means of support from its own properties, with the aid of a State subsidy, which amounted in 1912-13 to 811,434 kroner. The organization is similar to that of German universities. In addition to ordinary and extraordinary professors there are honorary docents (midlertidig docent), whose salaries and period of service are fixed for each individual case. Any person with a doctor's degree obtained at the University of Copenhagen may lecture at the institution. The faculties are as follows: Theology; law and statesmanship; medicine; philosophy; mathematics and science. The courses are of seven years duration in medicine and from five to six years in the other faculties. Women are admitted on equal terms with men.

Sweden.—Sweden has two State universities, at Upsala and Lund, respectively, and a State faculty of medicine at Stockholm. There are also two private universities at Stockholm and Goteborg, respectively.

The organization and instruction at the State institutions are based on the statutes of January 10, 1876. The supreme control of all the Swedish universities (including the two private institutions) is vested in the "Academical congress," composed of representatives of the universities and a "chancellor" appointed by the King.

The internal administration of individual institutions is executed by the "Greater consistory," composed of the rector, the prorector, and a number of professors. There is also a "Smaller consistory," having charge of matters pertaining to instruction.

The State universities derive considerable incomes from their funds, real estate, and other properties, the remainder being covered by State subsidies.

Norway.—The University of Christiania, established in 1811 by King Frederick VI, is the center of higher education in Norway. It is lavishly endowed with funds and legacies, and enjoys special privileges, such as the monopoly for publishing all almanacs and calendars, free use of mails, etc. The university has the following faculties: Theology; law; medicine; history and philosophy; mathematics and science.

The administration of the university is exercised by the Collegium Academicum, composed of the rector and the deans of the five faculties.

Women students have the same privileges as men.

TABLE 11.—*Universities of the Scandinavian countries.*

Universities.	Students.	State subsidy.	Annual expenditure.
DENMARK.			
University of Copenhagen.....	2,800	Crowns. ¹ 811,434	Crowns. ¹ 1,187,053
SWEDEN.			
University of Upsala.....	2,419	928,874	1,560,072
University of Lund.....	1,347	802,319	4,782,910
Stockholm Faculty of Medicine.....	358	323,249	371,628
Stockholm High School ²	691	29,910	339,840
Goteborg High School ²	229	.....	153,653
NORWAY.			
University of Christiania.....	1,500	648,865	1,013,625

¹ Denmark, Sweden, and Norway have the same monetary unit, called *krone*, whose exchange value is \$0.2680.

² "Hogskola"—Private university.

The following table brings into comparative view university statistics of the foreign countries from which recent reports have been received at this office. The statements made in connection with the foregoing detailed tables sufficiently indicate the main distinctions to be kept in mind in considering the items tabulated.

As regards England, the fact may properly be emphasized that preparation for the profession of law is conducted in accordance with regulations issued by the council of legal education, which determines also the examination requirements for admission to the bar. Since the council also maintains classes, the universities do not comprise the entire body of law students in the country.

TABLE 12.—General table of university statistics.

Countries.	Date of statistics.	Institutions.	Professors and instructors.	Students.
Canada.....	1914	19	.....	14,616
Central America.....	1914	3	.....	304
Cuba.....	1915-16	1	.....	1,432
South America:				
Argentina.....	1913-14	3	655	6,635
Bolivia.....	1908	1	14	151
Brazil.....	1913-14	¹ 16	393	5,632
Chile.....	1914	3	164	2,474
Colombia.....	1913	² 7	.....	932
Ecuador.....	1915	3	88	465
Paraguay.....	1914	1	.....	166
Peru.....	1913-14	2	.....	170
Uruguay.....	1914	1	.....	1,372
Venezuela.....	1914-15	3	.....	152
Great Britain and Ireland:				
England and Wales.....	1913-14	³ 14	3,052	29,426
Scotland.....	1913-14	4	478	7,515
Ireland.....	1915-16	3	347	2,617
Austria.....	1913-14	8	1,920	31,646
Hungary.....	1912-13	5	504	11,357
Belgium.....	1912-13	4	432	5,439
Bulgaria.....	1911-12	1	70	2,260
Denmark.....	1915	1	98	2,800
France.....	1913-14	16	1,928	41,207
Germany.....	1914-15	22	3,450	53,074
Greece.....	1912	2	162	3,250
Italy.....	1913-14	24	.....	22,407
Netherlands.....	1913-14	5	⁴ 300	5,474
Norway.....	1913	1	111	1,500
Portugal.....	1912-13	3	.....	2,916
Roumania.....	1910-11	2	.....	4,047
Russia.....	1912	10	1,716	34,538
Serbia.....	1910	1	98	934
Spain.....	1915	11	.....	15,203
Sweden.....	1914	5	.....	4,999
Switzerland.....	1915	7	897	8,003
Japan.....	1913-14	4	815	9,572
Australia.....	1913	6	311	4,172

¹ Faculties, see Chapter XXXI, p. 547.² Includes 6 departmental faculties.³ Includes 3 university colleges.⁴ Exclusive of University of Rotterdam.

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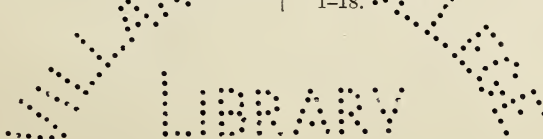
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